### Addendum 1

### **Air Quality Conformity Technical Documentation**

# Available online at www.greensboro-nc.gov/lrtp/proposed\_lrtp

or

GDOT Planning Office 300 W. Washington St. Greensboro, NC 27402

# **FINAL DRAFT**

## **APPENDIX C: Mobile Emissions Factors**

# **FINAL DRAFT**



# North Carolina Department of Environment and Natural Resources Division of Air Quality

Michael F. Easley, Governor

William G. Ross, Jr., Secretary B. Keith Overcash, P.E., Director

May 5, 2004

Ms. Kimberly D. Hinton North Carolina Department of Transportation Transportation Planning Branch 1554 Mail Service Center Raleigh, North Carolina 27699-1554

Subject:

Request for Functional Classification Specific Motor Vehicle Emissions Factors for Use in

Conformity Analysis of the Greensboro-High Point Metropolitan Planning Organizations

Long Range Transportation Plan

Dear Ms. Hinton:

This letter is in response to your letter dated April 20, 2004 requesting the Division of Air Quality prepare motor vehicle emission factors for the upcoming conformity analysis for Greensboro-High Point for volatile organic compounds and nitrogen oxides. Attached are copies of the input MOBILE6 files, summary tables for Guilford County, the urban portion of Davidson County, and the rural portion of Davidson County by pollutant of emission factors for 2004, 2014, 2020, and 2030 as you requested, and documentation of all the assumptions made in the analysis. All MOBILE6 input files and summary spreadsheets (which contain the output files) have been e-mailed to you for your convenience.

If you have any questions regarding this information please contact Phyllis Jones at (919) 715-1246.

Sincerely,

B. Kerth Overcash, P.E.

BKO:iv

attachments

cc:

Heather Hildebrandt w/o attachments

Laura Boothe w/o attachments Phyllis Jones w/o attachments

### **Conformity for Greensboro/High Point**

#### **Temperature Assumptions**

Temperature reflects what was in the original SIP submittal. The minimum temperature is 66 F and the maximum temperature is 89 F.

#### **RVP** Assumptions

RVP reflects what was in the original SIP submittal 7.8 psi.

#### **Vehicle Mix Assumptions**

For the 12 road types:

Vehicle mix has incorporated the increase in sales of sport utility vehicles and minivans for all years of evaluation. The 2030 mix is the same as 2020 due to the limited data on vehicle by road type in EPA documentation.

To calculate the vehicle mix to account for the large percentage of sport utility vehicles and minivans being purchased, DAQ used the following documentation from EPA: Fleet Characterization Data for MOBILE6: Development and Use of Age Distributions, Average Annual Mileage Accumulation Rates, and Projected Vehicle Counts for Use in MOBILE6 (EPA420-P-99-011). This document includes a breakdown by year from 1983 to 2050 of the number of light duty vehicles (according to MOBILE6 five vehicle types) on the roads on a national basis. DAQ used this data and combined vehicle types to reflect the three MOBILE5a light duty vehicle types. These calculated values for LDGT1 and LDGT2 are used for all road types. This MOBILE5b file was then processed through the MOBILE6 Utility provided by EPA and converted to the appropriate format for MOBILE6 which reflects 16 vehicle classes per road type.

#### **Vehicle Age Distribution**

The vehicle age distribution comes from annual registration data specific to the maintenance areas from NCDOT. For this analysis the data was from 2002. NCDOT provides the data by vehicle type; however, these types do not match the USEPA MOBILE types. USEPA has an utility that will convert MOBILE5 vehicle type information to the MOBILE6 vehicle types. Therefore, the data is manipulated to match the input requirements for MOBILE 5 as follows:

- NCDOT provides at least 25 years for all vehicle types, however MOBILE5 only recognizes 12 years for motorcycles. Therefore, the first 13 years are combined into one number.
- If more than 25 years are provided, the early years are combined and included in the 25<sup>th</sup> model year.

- NCDOT does record model years beyond the year of the report, for this set of data, 2003 model year was added to the 2002 model year information.
- The same registration distribution by age must be entered for LDGV, LDDV, and for LDGT1 and LDGT2 according to the MOBILE5 User's Guide.

Then using the MOBILE6 utility, the vehicle types were distributed across the 16 types in MOBILE6.

#### **Speed Assumptions**

Speeds were provided for 2004, 2014, 2020, and 2030 for the rural portion of Davidson County, the urban portion of Davidson County, and for Guilford County by NCDOT on April 20, 2004 in a letter from Kimberly Hinton. Tables 1, 2, and 3 summarize both the emission factors and the speeds for each year for each area of the Greensboro-High Point MPO.

#### **Vehicle Inspection and Maintenance Program Parameters**

Vehicles that are model year 1996 and newer are subject to a new inspection program referred to as onboard diagnostics (OBDII). This program covers all gasoline powered vehicles that are model year 1996 and newer. However, heavy duty vehicles are not tested due to the lack of the necessary equipment not being required on these vehicles. In MOBILE6 the OBDII program requires two separate programs to be modeled to properly model the benefits of the program. The program was introduced to the original 9 I/M counties (including Guilford County) and expanded to 48 counties by the end of 2006. Therefore, in the 2004 run, three separate programs are modeled in Guilford County (the original idle program and the two OBDII programs). In Guilford County the idle test will be phased-out in 2006, therefore in the 2014, 2020, and 2030 runs only the OBDII program is included in the input file. Davidson County was phased into the new I/M program in July of 2003 therefore all runs include the two OBDII programs.

#### **Vehicle Inspection and Maintenance Program Fractions**

In order to accurately reflect commuting patterns and therefore the number of vehicles traveling through Guilford and Davidson counties that are subject to the inspection and maintenance program, accident data is used. By 2004, our new inspection and maintenance program will have expanded to include 22 counties. By 2007, 48 counties will be phased into this new program. Therefore, the fraction of vehicles traveling through both counties in 2004, 2014, 2020, and 2030 subject to an inspection and maintenance program will increase significantly due to the increased number of counties that are in the program. Using 2000 accident data, separate analyses were completed to calculate the fractions for each conformity evaluation year. The accident data is reported as county of residence of the vehicle involved by the county of where the accident took place. Table 4 summarizes the fractions used for each analysis year for each county in this conformity determination.

**Table 4. I/M Fractions** 

County	2004	2014, 2020,
		and 2030
Davidson	0.89	0.96
Guilford	0.81	0.96

Mobile Emission Factors for 2004 Conformity Determination for the Rural and Urban Portions of Davidson County and Guilford County with the old SIP temperatures

	Inspecti Mainte		No Inspec Mainte			
2004						
Davidson - Rural	VOC	NOX	VOC	NOX	Speeds	I/M fraction
Road Type						
Urban Interstate	1.109	3.317	1.138	3.363	62	
Freeway & Expressway	1.172	2.194	1.205	2.244	56	
Urban Other Principle Arterial	1.396	1.593	1.441	1.647	28	
Urban Minor Arterial	1.371	1.425	1.415	1.479	31	
Urban Collector	1.374	1.366	1.419	1.420	31	
Urban Local	1.367	1.503	1.410	1.556	31	
Rural Interstate	1.032	5.061	1.056	5.100	65	0.89
Rural Other Principal Arterial	1.211	2.196	1.246	2.244	44	
Rural Minor Arterial	1.238	1.830	1.275	1.880	43	
Rural Major Collector	1.252	1.658	1.290	1.709	43	
Rural Minor Collector	1.260	1.639	1.299	1.690	42	
Rural Local	1.265	1.614	1.304	1.665	42	

2004	Inspecti Mainte		No Inspection and Maintenance			
Davidson - Urban	VOC	NOX	VOC	NOX	Cnaada	I/M fraction
Road Type	VOC	NOX	VOC	NOX	Speeds	I/IVI Traction
Urban Interstate	1.114	3.142	1.143	3.188	60	
Freeway & Expressway	1.176	2.154	1.209	2.204	55	
Urban Other Principle Arterial	1.369	1.571	1.413	1.624	30	
Urban Minor Arterial	1.358	1.421	1.402	1.474	32	
Urban Collector	1.349	1.357	1.393	1.411	33	
Urban Local	1.349	1.486	1.361	1.538	35 35	
Olban Eddai	1.519	1.400	1.301	1.550	33	
Rural Minor Arterial	1.257	1.789	1.295	1.839		
Rural Major Collector	1.252	1.658	1.290	1.709		
Rural Minor Collector	1.254	1.650	1.292	1.701		
Rural Local	1.254	1.634	1.291	1.685		
	Inspecti	on and	No Inspec	ction and		
	Mainte	nance	Maintenance			
2004						
2004 Guilford	VOC	NOX	VOC	NOX	Speeds	I/M fraction
Road Type	VOC	NOX	VOC	NOA	Speeds	I/W Haction
Urban Interstate	1.071	2.721	1.175	2.776	52	
Freeway & Expressway	1.110	2.721	1.173	2.170	52 52	
Urban Other Principle Arterial	1.289	1.572	1.427	1.635	29	
Urban Minor Arterial	1.277	1.416	1.415	1.479	31	
Urban Collector	1.257	1.347	1.393	1.411	33	
Urban Local	1.240	1.480	1.372	1.542	34	
Olban Local	1.240	1.460	1.372	1.542	34	
Rural Interstate	0.994	3.935	1.083	3.984	55	0.81
Rural Other Principal Arterial	1.087	2.422	1.196	2.479	53	
Rural Minor Arterial				4.007		
	1.162	1.808	1.282	1.867	42	
Rural Major Collector	1.162 1.168	1.808 1.649	1.282 1.290	1.867	42	
Rural Major Collector Rural Minor Collector						
	1.168	1.649	1.290	1.709	43	

	Inspect	tion and	No Ins	pection		
2004	Mainte	enance	and Mair	ntenance	Speeds	I/M Fraction
Guilford	VOC	NOX	VOC	NOX		
Road Type						
Rural Interstate	0.956	3.930	1.045	3.979	55	0.81
Rural Other Principal Arterial	1.047	2.416	1.154	2.473	53	
Rural Minor Arterial	1.117	1.800	1.235	1.859	42	
Rural Major Collector	1.123	1.641	1.243	1.701	43	
Rural Minor Collector	1.120	1.643	1.240	1.703	44	
Rural Local	1.124	1.617	1.244	1.677	44	
Urban Interstate	1.030	2.715	1.134	2.770	52	
Freeway & Expressway	1.069	2.061	1.181	2.120	52	
Urban Other Principle Arterial Urban Minor Arterial	1.236	1.561	1.372	1.623	29	
	1.225	1.405	1.361	1.468	31	
Urban Collector	1.206	1.337	1.340	1.400	33	
Urban Local	1.190	1.471	1.320	1.532	34	
2010						
Guilford	VOC	NOX	VOC	NOX		
Road Type						
Rural Interstate	0.575	1.858	0.629	1.931	55	0.96
Rural Other Principal Arterial	0.627	1.183	0.694	1.271	53	
Rural Minor Arterial	0.671	0.915	0.747	1.006	41	
Rural Major Collector	0.672	0.849	0.748	0.942	43	
Rural Minor Collector	0.668	0.856	0.743	0.950	45	
Rural Local	0.673	0.840	0.749	0.934	44	
Urban Interstate	0.618	1.313	0.682	1.397	52	
Freeway & Expressway	0.636	1.038	0.706	1.130	53	
Urban Other Principle Arterial	0.737	0.810	0.825	0.906	29	
Urban Minor Arterial	0.725	0.737	0.811	0.834	32	
Urban Collector	0.720	0.706	0.807	0.804	33	
Urban Local	0.719	0.771	0.803	0.867	33	
2014						
Guilford	VOC	NOX	VOC	NOX		
Road Type	VOC	NOX	VOC	NOX		
Rural Interstate	0.428	1.022	0.489	1.107	55	0.96
Rural Other Principal Arterial	0.461	0.695	0.536	0.797	53	0.50
Rural Minor Arterial	0.491	0.560	0.575	0.665	41	
Rural Major Collector	0.490	0.528	0.575	0.636	43	
Rural Minor Collector	0.488	0.533	0.573	0.642	45	
Rural Local	0.492	0.526	0.578	0.634	44	
Urban Interstate	0.456	0.756	0.528	0.855	52	
Freeway & Expressway	0.467	0.624	0.545	0.731	53	
Urban Other Principle Arterial	0.532	0.509	0.630	0.620	29	
Urban Minor Arterial	0.525	0.473	0.622	0.585	32	
Urban Collector	0.521	0.457	0.618	0.570	33	
Urban Local	0.522	0.489	0.616	0.600	33	
2020						
Guilford	VOC	NOX	VOC	NOX		
Road Type	•00	HOX	100	ПОЛ		
Rural Interstate	0.297	0.489	0.371	0.590	55	0.96
Rural Other Principal Arterial	0.313	0.354	0.404	0.476	53	
Rural Minor Arterial	0.332	0.296	0.434	0.419	41	
Rural Major Collector	0.330	0.283	0.433	0.411	43	
Rural Minor Collector	0.330	0.285	0.433	0.413	44	
Rural Local	0.332	0.284	0.435	0.412	44	
Urban Interstate	0.310	0.378	0.398	0.495	52	
Freeway & Expressway	0.315	0.324	0.409	0.451	53	
Urban Other Principle Arterial	0.359	0.274	0.475	0.404	29	
Urban Minor Arterial	0.356	0.260	0.473	0.392	31	
Urban Collector	0.352	0.253	0.468	0.386	32	
Urban Local	0.353	0.267	0.466	0.396	33	
2030						
Guilford	VOC	NOX	VOC	NOX		
Road Type						
Rural Interstate	0.224	0.278	0.296	0.379	56	0.96
Rural Other Principal Arterial	0.231	0.215	0.319	0.336	53	
Rural Minor Arterial	0.247	0.187	0.345	0.310	41	
Rural Major Collector	0.241	0.183	0.341	0.311	44	
Rural Minor Collector	0.243	0.185	0.341	0.313	45	
Rural Local	0.246	0.184	0.345	0.312	44	
Urban Interstate	0.229	0.226	0.314	0.343	53	
Freeway & Expressway	0.229	0.204	0.321	0.331	54	
Urban Other Principle Arterial	0.272	0.179	0.385	0.309	28	
Urban Minor Arterial	0.265	0.172	0.378	0.303	31	
Urban Collector	0.260	0.168	0.373	0.300	32	
Urban Local	0.267	0.176	0.376	0.305	32	

2004	Inspection and Maintenance		No Inspection and Maintenance		Speeds	I/M Fraction
Davidson	VOC	NOX	VOC	NOX		
Road Type						
Rural Minor Arterial	1.210	1.781	1.247	1.831	40	0.89
Rural Major Collector	1.206	1.650	1.243	1.701	43	
Rural Minor Collector	1.208	1.642	1.245	1.693	43	
Rural Local	1.207	1.626	1.244	1.677	44	
Urban Interstate Freeway & Expressway	1.074 1.134	3.137 2.148	1.103 1.167	3.183 2.197	60 55	
Urban Other Principle Arterial	1.316	1.560	1.359	1.613	30	
Urban Minor Arterial	1.305	1.410	1.349	1.463	32	
Urban Collector	1.297	1.347	1.340	1.400	33	
Urban Local	1.268	1.476	1.309	1.528	35	
2010						
Davidson	VOC	NOX	VOC	NOX		
Road Type						
Rural Minor Arterial	0.686	0.898	0.763	0.989	37	0.96
Rural Major Collector	0.672	0.849	0.748	0.942	43	
Rural Minor Collector	0.673	0.846	0.750	0.939	43	
Rural Local	0.670	0.845	0.746	0.939	45	
Urban Interstate	0.603	1.518	0.664	1.603	60 55	
Freeway & Expressway Urban Other Principle Arterial	0.632 0.730	1.063 0.805	0.700 0.817	1.155 0.901	55 30	
Urban Minor Arterial	0.725	0.737	0.811	0.834	32	
Urban Collector	0.726	0.708	0.814	0.807	32	
Urban Local	0.725	0.773	0.810	0.869	32	
2014						
2014 Davidson	VOC	NOX	VOC	NOX		
Road Type	VOC	NOX	VOC	NOX		
Rural Minor Arterial	0.500	0.550	0.587	0.655	37	0.96
Rural Major Collector	0.490	0.528	0.575	0.636	43	
Rural Minor Collector	0.492	0.527	0.577	0.636	43	
Rural Local	0.491	0.528	0.576	0.637	45	
Urban Interstate	0.448	0.863	0.516	0.963	60	
Freeway & Expressway	0.464	0.638	0.541	0.745	55	
Urban Other Principle Arterial	0.528	0.506	0.624	0.616	30	
Urban Minor Arterial	0.525	0.473	0.622	0.585	32	
Urban Collector Urban Local	0.525 0.526	0.459 0.491	0.623 0.621	0.572 0.601	32 32	
2020						
Davidson	VOC	NOX	VOC	NOX		
Road Type	0.007	0.000	0.440	0.445	00	0.00
Rural Major Collector	0.337	0.292	0.440	0.415	38	0.96
Rural Major Collector Rural Minor Collector	0.331 0.333	0.282 0.282	0.435 0.437	0.409 0.409	42 42	
Rural Local	0.333	0.285	0.437	0.403	45	
Urban Interstate	0.306	0.427	0.390	0.546	60	
Freeway & Expressway	0.313	0.331	0.407	0.458	55	
Urban Other Principle Arterial	0.359	0.274	0.475	0.404	29	
Urban Minor Arterial	0.353	0.259	0.468	0.391	32	
Urban Collector	0.349	0.252	0.464	0.385	33	
Urban Local	0.353	0.267	0.466	0.396	33	
2030						
Davidson Road Type	VOC	NOX	VOC	NOX		
Rural Minor Arterial	0.251	0.185	0.351	0.307	38	0.96
Rural Major Collector	0.243	0.182	0.343	0.309	43	
Rural Minor Collector	0.246	0.182	0.347	0.309	42	
Rural Local	0.244	0.185	0.343	0.313	45	
Urban Interstate	0.227	0.251	0.308	0.369	60	
Freeway & Expressway	0.229	0.206	0.320	0.333	55	
Urban Other Principle Arterial	0.272	0.179	0.385	0.309	28	
Urban Minor Arterial Urban Collector	0.258	0.170	0.367	0.300	34 33	
Urban Local	0.258 0.269	0.167 0.177	0.369 0.380	0.299 0.306	33 31	
C. Sail Edda	0.200	0.177	0.000	0.000	51	

2004 Davidson	Inspection and Maintenance VOC NOX		No Inspection and Maintenance VOC NOX		Speeds	I/M Fraction
Road Type						
Rural Interstate	0.995	5.056	1.019	5.096	65	0.89
Rural Other Principal Arterial	1.166	2.188	1.201	2.236	44	0.00
Rural Minor Arterial	1.192	1.823	1.229	1.872	43	
Rural Major Collector	1.206	1.650	1.243	1.701	43	
Rural Minor Collector	1.213	1.631	1.251	1.682	42	
Rural Local	1.218	1.606	1.256	1.656	42	
Urban Interstate	1.069	3.312	1.098	3.358	62	
	1.130	2.188	1.163		56	
Freeway & Expressway				2.238		
Urban Other Principle Arterial	1.342	1.581	1.386	1.634	28	
Urban Minor Arterial	1.318	1.415	1.361	1.468	31	
Urban Collector	1.320	1.355	1.365	1.409	31	
Urban Local	1.313	1.492	1.356	1.544	31	
2010						
Davidson	VOC	NOX	VOC	NOX		
Road Type						
Rural Interstate	0.564	2.410	0.614	2.484	65	0.96
Rural Other Principal Arterial	0.655	1.057	0.727	1.145	43	
Rural Minor Arterial	0.665	0.929	0.739	1.019	43	
Rural Major Collector	0.672	0.849	0.748	0.942	43	
Rural Minor Collector	0.676	0.841	0.753	0.934	42	
Rural Local	0.679	0.829	0.756	0.923	42	
Urban Interstate	0.601	1.604	0.660	1.690	62	
Freeway & Expressway	0.630	1.083	0.698	1.176	56	
Urban Other Principle Arterial	0.744	0.816	0.833	0.913	28	
Urban Minor Arterial	0.731			0.837		
Urban Collector		0.739	0.819	0.809	31 31	
Urban Local	0.732	0.711	0.821			
Oldan Local	0.731	0.775	0.818	0.871	31	
2014						
Davidson	VOC	NOX	VOC	NOX		
Road Type						
Rural Interstate	0.424	1.306	0.480	1.392	65	0.96
Rural Other Principal Arterial	0.479	0.627	0.559	0.729	43	
Rural Minor Arterial	0.487	0.567	0.570	0.672	43	
Rural Major Collector	0.490	0.528	0.575	0.636	43	
Rural Minor Collector	0.494	0.524	0.580	0.632	42	
Rural Local	0.496	0.520	0.583	0.628	42	
Urban Interstate	0.447	0.908	0.514	1.008	62	
Freeway & Expressway	0.463	0.648	0.540	0.756	56	
Urban Other Principle Arterial	0.537	0.512	0.636	0.624	28	
Urban Minor Arterial	0.529	0.474	0.627	0.587	31	
Urban Collector	0.529	0.460	0.628	0.574	31	
Urban Local	0.531	0.492	0.627	0.603	31	
2020 Davidson	VOC	NOX	VOC	NOX		
Road Type	VOC	NOV	VUC	NOX		
	0.206	0.616	0.266	0.710	GE.	0.06
Rural Other Principal Arterial	0.296 0.325	0.616 0.322	0.366 0.422	0.719 0.442	65 43	0.96
Rural Other Principal Arterial						
Rural Minor Arterial	0.329	0.300	0.429	0.424	43	
Rural Major Collector	0.331	0.282	0.435 0.437	0.409	42 42	
Rural Minor Collector Rural Local	0.333 0.335	0.282 0.280	0.437	0.409 0.408	42 42	
Urban Interstate	0.306	0.448	0.388	0.567	62	
Freeway & Expressway	0.313	0.336	0.406	0.464	56	
Urban Other Principle Arterial	0.367	0.278	0.485	0.410	27	
Urban Minor Arterial	0.356	0.260	0.473	0.392	31	
Urban Collector	0.355	0.254	0.473	0.388	31	
Urban Local	0.359	0.269	0.474	0.399	31	
2030						
Davidson	VOC	NOX	VOC	NOX		
Road Type	• • • •	110/	*00	110/		
Rural Interstate	0.224	0.332	0.292	0.435	64	0.96
Rural Other Principal Arterial	0.224	0.332	0.292	0.433	42	0.30
Rural Minor Arterial	0.245	0.189	0.343	0.312	42	
Rural Major Collector	0.244	0.181	0.344	0.308	42	
Rural Minor Collector	0.246	0.182	0.347	0.309	42	
Rural Local	0.248	0.182	0.349	0.309	42	
Urban Interstate	0.227	0.262	0.307	0.381	62	
Freeway & Expressway	0.229	0.206	0.320	0.333	55	
Urban Other Principle Arterial	0.280	0.183	0.395	0.315	26	
Urban Minor Arterial	0.265	0.172	0.378	0.303	31	
Urban Collector	0.263	0.169	0.377	0.301	31	
Urban Local	0.269	0.177	0.380	0.306	31	

#### MOBILE6 INPUT FILE:

> Guilford County 2004 conformity determination

> 2002 Veh Age Dist.

**POLLUTANTS** : HC NOX

**RUN DATA** 

\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** : 7.8

: 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

I/M PROGRAM : 1 1983 2050 1 TRC IDLE

I/M MODEL YEARS

: 1 1975 1995 : 1 22222 2222222 1 I/M VEHICLES

I/M STRINGENCY : 1 10.0 : 1 95.0 I/M COMPLIANCE I/M WAIVER RATES : 1 5.0 5.0

I/M PROGRAM : 2 2002 2050 1 TRC OBD I/M

I/M MODEL YEARS : 2 1996 2050

: 2 22222 111111111 1 I/M VEHICLES

I/M STRINGENCY : 2 10.0 I/M COMPLIANCE : 2 95.0 I/M WAIVER RATES : 2 5.0 5.0

: 3 2002 2050 1 TRC EVAP OBD I/M PROGRAM

: 3 1996 2050 I/M MODEL YEARS

I/M VEHICLES : 3 22222 111111111 1

I/M STRINGENCY : 3 10.0 : 3 95.0 I/M COMPLIANCE I/M WAIVER RATES : 3 5.0 5.0

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

: Rural interstate SCENARIO RECORD

CALENDAR YEAR : 2004 EVALUATION MONTH

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 3670\ 0.\ 0566\ 0.\ 1884\ 0.\ 0589\ 0.\ 0271\ 0.\ 0959\ 0.\ 0095\ 0.\ 0075$  $0.\ 0057\ 0.\ 0212\ 0.\ 0251\ 0.\ 0274\ 0.\ 0977\ 0.\ 0048\ 0.\ 0022\ 0.\ 0050$ 

**AVERAGE SPEED** : 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0

\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2004

EVALUATION MONTH

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 4450\ 0.\ 0686\ 0.\ 2284\ 0.\ 0719\ 0.\ 0331\ 0.\ 0481\ 0.\ 0048\ 0.\ 0038$  $0.\ 0028\ 0.\ 0106\ 0.\ 0126\ 0.\ 0137\ 0.\ 0490\ 0.\ 0024\ 0.\ 0011\ 0.\ 0041$ 

AVERAGE SPEED : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO SECTION \*\*\*\*\*\*\* \*\*\*\*\*\*\*\*

: Rural minor arterial SCENARIO RECORD

CALENDAR YEAR : 2004 **EVALUATION MONTH** 7

> Rural minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 4560\ 0.\ 0714\ 0.\ 2376\ 0.\ 0747\ 0.\ 0343\ 0.\ 0391\ 0.\ 0039\ 0.\ 0031$  $0.0023 \ 0.0086 \ 0.0102 \ 0.0112 \ 0.0398 \ 0.0020 \ 0.0009 \ 0.0049$ 

AVERAGE SPEED : 42 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\*\*

: Rural major collector SCENARIO RECORD

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural major collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\ 4720\ 0.\ 0730\ 0.\ 2430\ 0.\ 0767\ 0.\ 0353\ 0.\ 0307\ 0.\ 0030\ 0.\ 0024$  $0.\ 0018\ 0.\ 0068\ 0.\ 0080\ 0.\ 0088\ 0.\ 0312\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\*\*

: Rural local SCENARIO RECORD

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural local mix and speeds

VMT FRACTIONS

**AVERAGE SPEED** : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\* SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\ 4260\ 0.\ 0658\ 0.\ 2192\ 0.\ 0685\ 0.\ 0315\ 0.\ 0597\ 0.\ 0059\ 0.\ 0047$  $0.0035 \ 0.0132 \ 0.0157 \ 0.0171 \ 0.0608 \ 0.0030 \ 0.0014 \ 0.0040$ 

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0 SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 31 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 34 Arterial 0.0 100.0 0.0 0.0

END OF RUN :

#### gui l 04n

#### MOBILE6 INPUT FILE:

> Guilford County 2004 conformity determination Non-I/M

**POLLUTANTS** : HC NOX

RUN DATA

\*\*\*\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

FUEL RVP

: 7.8 : 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111 

SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 3670\ 0.\ 0566\ 0.\ 1884\ 0.\ 0589\ 0.\ 0271\ 0.\ 0959\ 0.\ 0095\ 0.\ 0075$  $0.\ 0057\ 0.\ 0212\ 0.\ 0251\ 0.\ 0274\ 0.\ 0977\ 0.\ 0048\ 0.\ 0022\ 0.\ 0050$ 

**AVERAGE SPEED** : 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0

: Rural principle arterial SCENARIO RECORD

CALENDAR YEAR : 2004

**EVALUATION MONTH** 

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 4450\ 0.\ 0686\ 0.\ 2284\ 0.\ 0719\ 0.\ 0331\ 0.\ 0481\ 0.\ 0048\ 0.\ 0038$ 0. 0028 0. 0106 0. 0126 0. 0137 0. 0490 0. 0024 0. 0011 0. 0041

**AVERAGE SPEED** : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 4560\ 0.\ 0714\ 0.\ 2376\ 0.\ 0747\ 0.\ 0343\ 0.\ 0391\ 0.\ 0039\ 0.\ 0031$  $0.\ 0023\ 0.\ 0086\ 0.\ 0102\ 0.\ 0112\ 0.\ 0398\ 0.\ 0020\ 0.\ 0009\ 0.\ 0049$ 

**AVERAGE SPEED** : 42 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\ 4720\ 0.\ 0730\ 0.\ 2430\ 0.\ 0767\ 0.\ 0353\ 0.\ 0310\ 0.\ 0031\ 0.\ 0024$  $0.\ 0018\ 0.\ 0069\ 0.\ 0081\ 0.\ 0089\ 0.\ 0316\ 0.\ 0016\ 0.\ 0007\ 0.\ 0039$  gui l 04n

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2004

EVALUATION MONTH: 7

> Rural minor collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 52 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

#### gui l 04n

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 31 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 34 Arterial 0.0 100.0 0.0 0.0

END OF RUN:

#### MOBILE6 INPUT FILE:

> Guilford County 2010 Conformity Determination

> 2000 Veh Age Dist.

**POLLUTANTS** : HC NOX

RUN DATA

\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** : 7.8

: 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

: 1 2002 2050 1 TRC OBD I/M : 1 1996 2050 : 1 22222 11111111 1 I/M PROGRAM

I/M MODEL YEARS

I/M VEHICLES

I/M STRINGENCY : 1 10.0 : 1 95.0 I/M COMPLIANCE I/M WAIVER RATES : 1 5.0 5.0

I/M PROGRAM : 2 2002 2050 1 TRC EVAP OBD

: 2 1996 2050 I/M MODEL YEARS

: 2 22222 111111111 1 I/M VEHICLES

I/M STRINGENCY : 2 10.0 I/M COMPLIANCE : 2 95.0 I/M WAIVER RATES : 2 5.0 5.0

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Rural interstate

: 2010 CALENDAR YEAR

**EVALUATION MONTH** 

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 3070\ 0.\ 0668\ 0.\ 2222\ 0.\ 0699\ 0.\ 0321\ 0.\ 0955\ 0.\ 0094\ 0.\ 0078$  $0.\ 0058\ 0.\ 0213\ 0.\ 0252\ 0.\ 0274\ 0.\ 0975\ 0.\ 0048\ 0.\ 0022\ 0.\ 0051$ 

: 55 Non-Ramp 100.0 0.0 0.0 0.0 **AVERAGE SPEED** 

\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2010

**EVALUATION MONTH** 

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3720\ 0.\ 0811\ 0.\ 2699\ 0.\ 0849\ 0.\ 0391\ 0.\ 0479\ 0.\ 0047\ 0.\ 0039$  $0.0029 \ 0.0107 \ 0.0126 \ 0.0137 \ 0.0489 \ 0.0024 \ 0.0011 \ 0.0042$ 

**AVERAGE SPEED** : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\* SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2010 **EVALUATION MONTH** 

> Rural minor arterial mix and speeds

gui l 10

VMT FRACTIONS

AVERAGE SPEED : 41 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Rural major collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 45 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

0. 3960 0. 0866 0. 2884 0. 0904 0. 0416 0. 0293 0. 0029 0. 0024 0. 0018 0. 0065 0. 0077 0. 0084 0. 0299 0. 0015 0. 0007 0. 0059

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 52 Non-Ramp 100. 0 0. 0 0. 0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

END OF RUN:

MOBILE6 INPUT FILE:

>Guilford County 2010 Conformity Determination Non-I/M > 2000 Veh Age Dist.

**POLLUTANTS** : HC NOX

RUN DATA

\*\*\*\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** : 7.8

: 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111 \*\*\*\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*\*

SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2010 EVALUATION MONTH

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 3070\ 0.\ 0668\ 0.\ 2222\ 0.\ 0699\ 0.\ 0321\ 0.\ 0955\ 0.\ 0094\ 0.\ 0078$  $0.\ 0058\ 0.\ 0213\ 0.\ 0252\ 0.\ 0274\ 0.\ 0975\ 0.\ 0048\ 0.\ 0022\ 0.\ 0051$ 

: 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0 **AVERAGE SPEED** 

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2010 EVALUATION MONTH

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3720\ 0.\ 0811\ 0.\ 2699\ 0.\ 0849\ 0.\ 0391\ 0.\ 0479\ 0.\ 0047\ 0.\ 0039$  $0.\ 0029\ 0.\ 0107\ 0.\ 0126\ 0.\ 0137\ 0.\ 0489\ 0.\ 0024\ 0.\ 0011\ 0.\ 0042$ 

: 53 Non-Ramp 100.0 0.0 0.0 0.0 **AVERAGE SPEED** 

SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2010 EVALUATION MONTH

> Rural minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 3830\ 0.\ 0839\ 0.\ 2791\ 0.\ 0877\ 0.\ 0403\ 0.\ 0389\ 0.\ 0038\ 0.\ 0032$  $0.\ 0024\ 0.\ 0087\ 0.\ 0103\ 0.\ 0111\ 0.\ 0397\ 0.\ 0020\ 0.\ 0009\ 0.\ 0050$ 

**AVERAGE SPEED** : 41 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2010 EVALUATION MONTH

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\ 3950\ 0.\ 0862\ 0.\ 2868\ 0.\ 0904\ 0.\ 0416\ 0.\ 0309\ 0.\ 0030\ 0.\ 0025$  $0.\ 0019\ 0.\ 0069\ 0.\ 0081\ 0.\ 0088\ 0.\ 0315\ 0.\ 0016\ 0.\ 0007\ 0.\ 0041$  gui l 10n

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 45 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*\*
SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 53 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

 $0.4000 \, 0.0869 \, 0.2891 \, 0.0904 \, 0.0416 \, 0.0286 \, 0.0028 \, 0.0023$ 

gui l 10n

0. 0017 0. 0064 0. 0075 0. 0082 0. 0292 0. 0015 0. 0007 0. 0031

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2010 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

END OF RUN :

#### MOBILE6 INPUT FILE:

> Guilford County 2014 conformity determination

**POLLUTANTS** : HC NOX

RUN DATA

\*\*\*\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** 

: 7.8 : 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

I/M PROGRAM : 1 2002 2050 1 TRC OBD I/M

: 1 1996 2050 I/M MODEL YEARS

: 1 22222 111111111 1 : 1 10.0 I/M VEHICLES

I/M STRINGENCY : 1 95.0 I/M COMPLIANCE I/M WAIVER RATES : 1 5.0 5.0

I/M PROGRAM : 2 2002 2050 1 TRC EVAP OBD

I/M MODEL YEARS

: 2 1996 2050 : 2 2222 1111111 1 I/M VEHICLES

I/M STRINGENCY : 2 10.0 I/M COMPLIANCE : 2 95.0 I/M WAIVER RATES : 2 5.0 5.0

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2014 **EVALUATION MONTH** 

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 2780\ 0.\ 0718\ 0.\ 2392\ 0.\ 0747\ 0.\ 0343\ 0.\ 0955\ 0.\ 0094\ 0.\ 0079$  $0.\ 0059\ 0.\ 0214\ 0.\ 0252\ 0.\ 0274\ 0.\ 0974\ 0.\ 0048\ 0.\ 0022\ 0.\ 0049$ 

: 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0 AVERAGE SPEED

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2014 **EVALUATION MONTH** 

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\,\, 3380\,\, 0.\,\, 0869\,\, 0.\,\, 2891\,\, 0.\,\, 0911\,\, 0.\,\, 0419\,\, 0.\,\, 0479\,\, 0.\,\, 0047\,\, 0.\,\, 0040\,\, 0.\,\, 0030\,\, 0.\,\, 0107\,\, 0.\,\, 0126\,\, 0.\,\, 0137\,\, 0.0040\,\, 0$ 

 $0.0489 \ 0.0024 \ 0.0011 \ 0.0040$ 

: 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0 AVERAGE SPEED

\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2014 **EVALUATION MONTH** 

> Rural minor arterial mix and speeds

VMT FRACTIONS

gui l 14

 $0.\ 3470\ 0.\ 0901\ 0.\ 2999\ 0.\ 0938\ 0.\ 0432\ 0.\ 0389\ 0.\ 0038\ 0.\ 0032\ 0.\ 0024\ 0.\ 0087\ 0.\ 0103\ 0.\ 0111$ 

 $0.\ 0397\ \ 0.\ 0020\ \ 0.\ 0009\ \ 0.\ 0050$ 

AVERAGE SPEED : 41 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\ 3590\ \ 0.\ 0924\ \ 0.\ 3076\ \ 0.\ 0966\ \ 0.\ 0444\ \ 0.\ 0309\ \ 0.\ 0030\ \ 0.\ 0026\ \ 0.\ 0019\ \ 0.\ 0069\ \ 0.\ 0081\ \ 0.\ 0088$ 

 $0.\ 0315\ 0.\ 0016\ 0.\ 0007\ 0.\ 0040$ 

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\ 3590\ 0.\ 0924\ 0.\ 3076\ 0.\ 0966\ 0.\ 0444\ 0.\ 0305\ 0.\ 0030\ 0.\ 0025\ 0.\ 0019\ 0.\ 0068\ 0.\ 0081\ 0.\ 0087$ 

 $0.\ 0312\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 45 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

 $0.\ 3590\ \ 0.\ 0929\ \ 0.\ 3091\ \ 0.\ 0973\ \ 0.\ 0447\ \ 0.\ 0293\ \ 0.\ 0029\ \ 0.\ 0024\ \ 0.\ 0018\ \ 0.\ 0065\ \ 0.\ 0077\ \ 0.\ 0084$ 

 $0.0298 \ 0.0015 \ 0.0007 \ 0.0060$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\,\,3220\ \ \, 0.\,\,0836\ \ \, 0.\,\,2784\ \ \, 0.\,\,0870\ \ \, 0.\,\,0400\ \ \, 0.\,\,0595\ \ \, 0.\,\,0058\ \ \, 0.\,\,0049\ \ \, 0.\,\,0037\ \ \, 0.\,\,0133\ \ \, 0.\,\,0157\ \ \, 0.\,\,0170$ 

 $0.\ 0607\ 0.\ 0030\ 0.\ 0014\ 0.\ 0040$ 

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban freeway mix and speeds

#### gui l 14

VMT FRACTIONS

 $0.\ 3520\ 0.\ 0908\ 0.\ 3022\ 0.\ 0945\ 0.\ 0435\ 0.\ 0367\ 0.\ 0036\ 0.\ 0030\ 0.\ 0023\ 0.\ 0082\ 0.\ 0097\ 0.\ 0105$ 

 $0.0374 \ 0.0019 \ 0.0009 \ 0.0028$ 

AVERAGE SPEED : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3620\ 0.\ 0933\ 0.\ 3107\ 0.\ 0973\ 0.\ 0447\ 0.\ 0286\ 0.\ 0028\ 0.\ 0024\ 0.\ 0018\ 0.\ 0064\ 0.\ 0075\ 0.\ 0082$ 

0. 0292 0. 0015 0. 0007 0. 0029

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 3690\ 0.\ 0956\ 0.\ 3184\ 0.\ 1000\ 0.\ 0460\ 0.\ 0215\ 0.\ 0021\ 0.\ 0018\ 0.\ 0013\ 0.\ 0048\ 0.\ 0057\ 0.\ 0062$ 

 $0.0220\ 0.0011\ 0.0005\ 0.0040$ 

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

SCENARIO RECORD : Urban co CALENDAR YEAR : 2014

EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

 $0.\ 3740\ 0.\ 0966\ 0.\ 3214\ 0.\ 1007\ 0.\ 0463\ 0.\ 0186\ 0.\ 0018\ 0.\ 0015\ 0.\ 0011\ 0.\ 0042\ 0.\ 0049\ 0.\ 0053$ 

0.0190 0.0009 0.0004 0.0033

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

END OF RUN :

#### MOBILE6 INPUT FILE:

> Guilford County 2014 conformity determination Non-I/M

**POLLUTANTS** : HC NOX

RUN DATA

\*\*\*\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** 

: 7.8 : 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2014 EVALUATION MONTH

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 2780\ 0.\ 0718\ 0.\ 2392\ 0.\ 0747\ 0.\ 0343\ 0.\ 0955\ 0.\ 0094\ 0.\ 0079$  $0.\ 0059\ 0.\ 0214\ 0.\ 0252\ 0.\ 0274\ 0.\ 0974\ 0.\ 0048\ 0.\ 0022\ 0.\ 0049$ 

: 55 Non-Ramp 100.0 0.0 0.0 0.0 **AVERAGE SPEED** 

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2014 EVALUATION MONTH

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\,\, 3380\,\, 0.\,\, 0869\,\, 0.\,\, 2891\,\, 0.\,\, 0911\,\, 0.\,\, 0419\,\, 0.\,\, 0479\,\, 0.\,\, 0047\,\, 0.\,\, 0040\,\, 0.\,\, 0030\,\, 0.\,\, 0107\,\, 0.\,\, 0126\,\, 0.\,\, 0137\,\, 0.0040\,\, 0$ 

 $0.0489 \ 0.0024 \ 0.0011 \ 0.0040$ 

: 53 Non-Ramp 100.0 0.0 0.0 0.0 **AVERAGE SPEED** 

SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2014 **EVALUATION MONTH** 

> Rural minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 3470\ \ 0.\ 0901\ \ 0.\ 2999\ \ 0.\ 0938\ \ 0.\ 0432\ \ 0.\ 0389\ \ 0.\ 0038\ \ 0.\ 0032\ \ 0.\ 0024\ \ 0.\ 0087\ \ 0.\ 0103\ \ 0.\ 0111$ 

 $0.0397 \ 0.0020 \ 0.0009 \ 0.0050$ 

: 41 Arterial 0.0 100.0 0.0 0.0 **AVERAGE SPEED** 

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2014 **EVALUATION MONTH** 

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\ 3590\ \ 0.\ 0924\ \ 0.\ 3076\ \ 0.\ 0966\ \ 0.\ 0444\ \ 0.\ 0309\ \ 0.\ 0030\ \ 0.\ 0026\ \ 0.\ 0019\ \ 0.\ 0069\ \ 0.\ 0081\ \ 0.\ 0088$ 

0.0315 0.0016 0.0007 0.0040

#### gui l 14n

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\ 3590\ 0.\ 0924\ 0.\ 3076\ 0.\ 0966\ 0.\ 0444\ 0.\ 0305\ 0.\ 0030\ 0.\ 0025\ 0.\ 0019\ 0.\ 0068\ 0.\ 0081\ 0.\ 0087$ 

 $0.\ 0312\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 45 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

 $0.\ 3590\ \ 0.\ 0929\ \ 0.\ 3091\ \ 0.\ 0973\ \ 0.\ 0447\ \ 0.\ 0293\ \ 0.\ 0029\ \ 0.\ 0024\ \ 0.\ 0018\ \ 0.\ 0065\ \ 0.\ 0077\ \ 0.\ 0084$ 

 $0.\ 0298\ 0.\ 0015\ 0.\ 0007\ 0.\ 0060$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban interstate CALENDAR YEAR : 2014

EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\ 3220\ 0.\ 0836\ 0.\ 2784\ 0.\ 0870\ 0.\ 0400\ 0.\ 0595\ 0.\ 0058\ 0.\ 0049\ 0.\ 0037\ 0.\ 0133\ 0.\ 0157\ 0.\ 0170$ 

 $0.\ 0607\ 0.\ 0030\ 0.\ 0014\ 0.\ 0040$ 

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

 $0.\ 3520\ 0.\ 0908\ 0.\ 3022\ 0.\ 0945\ 0.\ 0435\ 0.\ 0367\ 0.\ 0036\ 0.\ 0030\ 0.\ 0023\ 0.\ 0082\ 0.\ 0097\ 0.\ 0105$ 

 $0.0374\ 0.0019\ 0.0009\ 0.0028$ 

AVERAGE SPEED : 53 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3620\ 0.\ 0933\ 0.\ 3107\ 0.\ 0973\ 0.\ 0447\ 0.\ 0286\ 0.\ 0028\ 0.\ 0024\ 0.\ 0018\ 0.\ 0064\ 0.\ 0075\ 0.\ 0082$ 

gui l 14n

0.0292 0.0015 0.0007 0.0029

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 3690\ 0.\ 0956\ 0.\ 3184\ 0.\ 1000\ 0.\ 0460\ 0.\ 0215\ 0.\ 0021\ 0.\ 0018\ 0.\ 0013\ 0.\ 0048\ 0.\ 0057\ 0.\ 0062$ 

 $0.\ 0220\ 0.\ 0011\ 0.\ 0005\ 0.\ 0040$ 

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2014

EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

 $0.\ 3740\ 0.\ 0966\ 0.\ 3214\ 0.\ 1007\ 0.\ 0463\ 0.\ 0186\ 0.\ 0018\ 0.\ 0015\ 0.\ 0011\ 0.\ 0042\ 0.\ 0049\ 0.\ 0053$ 

 $0.\ 0190\ \ 0.\ 0009\ \ 0.\ 0004\ \ 0.\ 0033$ 

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2014 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

END OF RUN :

#### MOBILE6 INPUT FILE:

> Guilford County 2020 conformity determination

**POLLUTANTS** : HC NOX

RUN DATA

\*\*\*\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** 

: 7.8 : 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

I/M PROGRAM : 1 2002 2050 1 TRC OBD I/M

: 1 1996 2050 I/M MODEL YEARS

: 1 22222 11111111 1 : 1 10.0 I/M VEHICLES

I/M STRINGENCY I/M COMPLIANCE : 1 95.0 I/M WAIVER RATES : 1 5.0 5.0

I/M PROGRAM : 2 2002 2050 1 TRC EVAP OBD

I/M MODEL YEARS : 2 1996 2050

: 2 22222 111111111 1 I/M VEHICLES

I/M STRINGENCY : 2 10.0 I/M COMPLIANCE : 2 95.0 I/M WAIVER RATES : 2 5.0 5.0

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2020 EVALUATION MONTH

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 2540\ 0.\ 0758\ 0.\ 2522\ 0.\ 0795\ 0.\ 0365\ 0.\ 0955\ 0.\ 0094\ 0.\ 0079\ 0.\ 0059\ 0.\ 0214\ 0.\ 0252\ 0.\ 0273$ 

 $0.0974 \ 0.0048 \ 0.0022 \ 0.0050$ 

: 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0 AVERAGE SPEED

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2020 EVALUATION MONTH

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\,\, 3090\,\, 0.\,\, 0919\,\, 0.\,\, 3061\,\, 0.\,\, 0959\,\, 0.\,\, 0441\,\, 0.\,\, 0479\,\, 0.\,\, 0047\,\, 0.\,\, 0040\,\, 0.\,\, 0030\,\, 0.\,\, 0107\,\, 0.\,\, 0126\,\, 0.\,\, 0137\,\, 0.0040\,\, 0$ 

 $0.0488 \ 0.0024 \ 0.0011 \ 0.0041$ 

: 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0 AVERAGE SPEED

\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2020

**EVALUATION MONTH** 

> Rural minor arterial mix and speeds

VMT FRACTIONS

gui 120

0. 3180 0. 0949 0. 3161 0. 0993 0. 0457 0. 0389 0. 0038 0. 0032 0. 0024 0. 0087 0. 0103 0. 0111

 $0.\ 0397\ \ 0.\ 0020\ \ 0.\ 0009\ \ 0.\ 0050$ 

AVERAGE SPEED : 41 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\,\, 3280\ \, 0.\,\, 0977\ \, 0.\,\, 3253\ \, 0.\,\, 1021\ \, 0.\,\, 0469\ \, 0.\,\, 0309\ \, 0.\,\, 0030\ \, 0.\,\, 0026\ \, 0.\,\, 0019\ \, 0.\,\, 0069\ \, 0.\,\, 0081\ \, 0.\,\, 0088$ 

 $0.\ 0315\ 0.\ 0016\ 0.\ 0007\ 0.\ 0040$ 

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\ 3280\ \ 0.\ 0977\ \ 0.\ 3253\ \ 0.\ 1021\ \ 0.\ 0469\ \ 0.\ 0306\ \ 0.\ 0030\ \ 0.\ 0025\ \ 0.\ 0019\ \ 0.\ 0068\ \ 0.\ 0081\ \ 0.\ 0087$ 

 $0.\ 0311\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

 $0.\,\, 3300\,\, \, 0.\,\, 0979\,\, \, 0.\,\, 3261\,\, \, 0.\,\, 1021\,\, \, 0.\,\, 0469\,\, \, 0.\,\, 0293\,\, \, 0.\,\, 0029\,\, \, 0.\,\, 0024\,\, \, 0.\,\, 0018\,\, \, 0.\,\, 0065\,\, \, 0.\,\, 0077\,\, \, 0.\,\, 0084$ 

0. 0298 0. 0015 0. 0007 0. 0060

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\ 2940\ 0.\ 0882\ 0.\ 2938\ 0.\ 0925\ 0.\ 0425\ 0.\ 0595\ 0.\ 0059\ 0.\ 0049\ 0.\ 0037\ 0.\ 0133\ 0.\ 0157\ 0.\ 0170$ 

 $0.\ 0606\ 0.\ 0030\ 0.\ 0014\ 0.\ 0040$ 

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban freeway mix and speeds

gui 120

VMT FRACTIONS

 $0.\ 3220\ 0.\ 0959\ 0.\ 3191\ 0.\ 1000\ 0.\ 0460\ 0.\ 0367\ 0.\ 0036\ 0.\ 0030\ 0.\ 0023\ 0.\ 0082\ 0.\ 0097\ 0.\ 0105$ 

0.0374 0.0018 0.0009 0.0029

AVERAGE SPEED : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3310\ \ 0.\ 0986\ \ 0.\ 3284\ \ 0.\ 1028\ \ 0.\ 0473\ \ 0.\ 0286\ \ 0.\ 0028\ \ 0.\ 0024\ \ 0.\ 0018\ \ 0.\ 0064\ \ 0.\ 0075\ \ 0.\ 0082$ 

 $0.0292 \ 0.0014 \ 0.0007 \ 0.0029$ 

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 3370\ \ 0.\ 1012\ \ 0.\ 3368\ \ 0.\ 1055\ \ 0.\ 0485\ \ 0.\ 0215\ \ 0.\ 0021\ \ 0.\ 0018\ \ 0.\ 0013\ \ 0.\ 0048\ \ 0.\ 0057\ \ 0.\ 0062$ 

 $0.\ 0220\ 0.\ 0011\ 0.\ 0005\ 0.\ 0040$ 

AVERAGE SPEED : 31 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2020

EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

 $0.\ 3410\ 0.\ 1021\ 0.\ 3399\ 0.\ 1069\ 0.\ 0491\ 0.\ 0187\ 0.\ 0018\ 0.\ 0015\ 0.\ 0012\ 0.\ 0042\ 0.\ 0049\ 0.\ 0053$ 

0.0190 0.0009 0.0004 0.0031

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

 $0.\ 3330\ 0.\ 0993\ 0.\ 3307\ 0.\ 1041\ 0.\ 0479\ 0.\ 0254\ 0.\ 0025\ 0.\ 0021\ 0.\ 0016\ 0.\ 0057\ 0.\ 0067\ 0.\ 0073$ 

0.0259 0.0013 0.0006 0.0059

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

END OF RUN:

#### gui l 20n

#### MOBILE6 INPUT FILE:

> Guilford County 2020 conformity determination Non-I/M

POLLUTANTS : HC NOX

RUN DATA :

\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

FUEL RVP : 7.8

MI N/MAX TEMP : 66.0 89.0

REG DIST : triadage.prn

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*\*
SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 2540\ 0.\ 0758\ 0.\ 2522\ 0.\ 0795\ 0.\ 0365\ 0.\ 0955\ 0.\ 0094\ 0.\ 0079\ 0.\ 0059\ 0.\ 0214\ 0.\ 0252\ 0.\ 0273$ 

 $0.\ 0974\ 0.\ 0048\ 0.\ 0022\ 0.\ 0050$ 

AVERAGE SPEED : 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\,\, 3090\,\, 0.\,\, 0919\,\, 0.\,\, 3061\,\, 0.\,\, 0959\,\, 0.\,\, 0441\,\, 0.\,\, 0479\,\, 0.\,\, 0047\,\, 0.\,\, 0040\,\, 0.\,\, 0030\,\, 0.\,\, 0107\,\, 0.\,\, 0126\,\, 0.\,\, 0137\,\, 0.0040\,\, 0$ 

 $0.\ 0488\ \ 0.\ 0024\ \ 0.\ 0011\ \ 0.\ 0041$ 

AVERAGE SPEED : 53 Non-Ramp 100.0 0.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural minor arterial mix and speeds

VMT FRACTIONS

 $0.\,\,3180\,\,\,0.\,\,0949\,\,\,0.\,\,3161\,\,\,0.\,\,0993\,\,\,0.\,\,0457\,\,\,0.\,\,0389\,\,\,0.\,\,0038\,\,\,0.\,\,0032\,\,\,0.\,\,0024\,\,\,0.\,\,0087\,\,\,0.\,\,0103\,\,\,0.\,\,0111$ 

 $0.0397 \ 0.0020 \ 0.0009 \ 0.0050$ 

AVERAGE SPEED : 41 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\,\, 3280\ \, 0.\,\, 0977\ \, 0.\,\, 3253\ \, 0.\,\, 1021\ \, 0.\,\, 0469\ \, 0.\,\, 0309\ \, 0.\,\, 0030\ \, 0.\,\, 0026\ \, 0.\,\, 0019\ \, 0.\,\, 0069\ \, 0.\,\, 0081\ \, 0.\,\, 0088$ 

0. 0315 0. 0016 0. 0007 0. 0040

#### gui l 20n

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\,\, 3280\,\, 0.\,\, 0977\,\, 0.\,\, 3253\,\, 0.\,\, 1021\,\, 0.\,\, 0469\,\, 0.\,\, 0306\,\, 0.\,\, 0030\,\, 0.\,\, 0025\,\, 0.\,\, 0019\,\, 0.\,\, 0068\,\, 0.\,\, 0081\,\, 0.\,\, 0087\,\, 0.0011\,\, 0.0015\,\, 0.0025\,\, 0.0019\,\, 0.0068\,\, 0.0081\,\, 0.0087\,\, 0.0011\,\, 0.0015\,\, 0$ 

 $0.\ 0311\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

 $0.\ 3300\ 0.\ 0979\ 0.\ 3261\ 0.\ 1021\ 0.\ 0469\ 0.\ 0293\ 0.\ 0029\ 0.\ 0024\ 0.\ 0018\ 0.\ 0065\ 0.\ 0077\ 0.\ 0084$ 

 $0.\ 0298\ 0.\ 0015\ 0.\ 0007\ 0.\ 0060$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*

SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\ 2940\ 0.\ 0882\ 0.\ 2938\ 0.\ 0925\ 0.\ 0425\ 0.\ 0595\ 0.\ 0059\ 0.\ 0049\ 0.\ 0037\ 0.\ 0133\ 0.\ 0157\ 0.\ 0170$ 

 $0.\ 0606\ 0.\ 0030\ 0.\ 0014\ 0.\ 0040$ 

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

 $0.\ 3220\ 0.\ 0959\ 0.\ 3191\ 0.\ 1000\ 0.\ 0460\ 0.\ 0367\ 0.\ 0036\ 0.\ 0030\ 0.\ 0023\ 0.\ 0082\ 0.\ 0097\ 0.\ 0105$ 

0.0374 0.0018 0.0009 0.0029

AVERAGE SPEED : 53 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3310\ 0.\ 0986\ 0.\ 3284\ 0.\ 1028\ 0.\ 0473\ 0.\ 0286\ 0.\ 0028\ 0.\ 0024\ 0.\ 0018\ 0.\ 0064\ 0.\ 0075\ 0.\ 0082$ 

gui l 20n

 $0.0292 \ 0.0014 \ 0.0007 \ 0.0029$ 

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

0. 3370 0. 1012 0. 3368 0. 1055 0. 0485 0. 0215 0. 0021 0. 0018 0. 0013 0. 0048 0. 0057 0. 0062

 $0.\ 0220\ 0.\ 0011\ 0.\ 0005\ 0.\ 0040$ 

AVERAGE SPEED : 31 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2020

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

 $0.\ 3410\ 0.\ 1021\ 0.\ 3399\ 0.\ 1069\ 0.\ 0491\ 0.\ 0187\ 0.\ 0018\ 0.\ 0015\ 0.\ 0012\ 0.\ 0042\ 0.\ 0049\ 0.\ 0053$ 

 $0.\ 0190\ \ 0.\ 0009\ \ 0.\ 0004\ \ 0.\ 0031$ 

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2020 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

 $0.\,3330\,\,\,0.\,0993\,\,\,0.\,3307\,\,\,0.\,1041\,\,\,0.\,0479\,\,\,0.\,0254\,\,\,0.\,0025\,\,\,0.\,0021\,\,\,0.\,0016\,\,\,0.\,0057\,\,\,0.\,0067\,\,\,0.\,0073$ 

 $0.\ 0259\ 0.\ 0013\ 0.\ 0006\ 0.\ 0059$ 

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

END OF RUN :

### MOBILE6 INPUT FILE:

> Guilford County 2030 conformity determination

**POLLUTANTS** : HC NOX

RUN DATA

\*\*\*\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** 

: 7.8 : 66.0 89.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

I/M PROGRAM : 1 2002 2050 1 TRC OBD I/M

: 1 1996 2050 I/M MODEL YEARS

: 1 22222 11111111 1 : 1 10.0 I/M VEHICLES

I/M STRINGENCY I/M COMPLIANCE : 1 95.0 I/M WAIVER RATES : 1 5.0 5.0

I/M PROGRAM : 2 2002 2050 1 TRC EVAP OBD

I/M MODEL YEARS : 2 1996 2050

: 2 22222 111111111 1 I/M VEHICLES

I/M STRINGENCY : 2 10.0 I/M COMPLIANCE : 2 95.0 I/M WAIVER RATES : 2 5.0 5.0

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*

SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2030 EVALUATION MONTH

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 2540\ 0.\ 0758\ 0.\ 2522\ 0.\ 0795\ 0.\ 0365\ 0.\ 0955\ 0.\ 0094\ 0.\ 0079\ 0.\ 0059\ 0.\ 0214\ 0.\ 0252\ 0.\ 0273$ 

 $0.0974 \ 0.0048 \ 0.0022 \ 0.0050$ 

: 56 Non-Ramp 100.0 0.0 0.0 0.0 AVERAGE SPEED

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2030 EVALUATION MONTH

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\,\, 3090\,\,\, 0.\,\, 0919\,\,\, 0.\,\, 3061\,\,\, 0.\,\, 0959\,\,\, 0.\,\, 0441\,\,\, 0.\,\, 0479\,\,\, 0.\,\, 0047\,\,\, 0.\,\, 0040\,\,\, 0.\,\, 0030\,\,\, 0.\,\, 0107\,\,\, 0.\,\, 0126\,\,\, 0.\,\, 0137\,\, 0.0040\,\,\,$ 

 $0.0488 \ 0.0024 \ 0.0011 \ 0.0041$ 

: 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0 AVERAGE SPEED

\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2030 **EVALUATION MONTH** 

> Rural minor arterial mix and speeds

VMT FRACTIONS

gui 130

 $0.\ 3180\ 0.\ 0949\ 0.\ 3161\ 0.\ 0993\ 0.\ 0457\ 0.\ 0389\ 0.\ 0038\ 0.\ 0032\ 0.\ 0024\ 0.\ 0087\ 0.\ 0103\ 0.\ 0111$ 

 $0.\ 0397\ \ 0.\ 0020\ \ 0.\ 0009\ \ 0.\ 0050$ 

AVERAGE SPEED : 41 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\ 3280\ 0.\ 0977\ 0.\ 3253\ 0.\ 1021\ 0.\ 0469\ 0.\ 0309\ 0.\ 0030\ 0.\ 0026\ 0.\ 0019\ 0.\ 0069\ 0.\ 0081\ 0.\ 0088$ 

 $0.\ 0315\ 0.\ 0016\ 0.\ 0007\ 0.\ 0040$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\,\, 3280\ \, 0.\,\, 0977\ \, 0.\,\, 3253\ \, 0.\,\, 1021\ \, 0.\,\, 0469\ \, 0.\,\, 0306\ \, 0.\,\, 0030\ \, 0.\,\, 0025\ \, 0.\,\, 0019\ \, 0.\,\, 0068\ \, 0.\,\, 0081\ \, 0.\,\, 0087$ 

 $0.\ 0311\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 45 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

 $0.\,\, 3300\ \, 0.\,\, 0979\ \, 0.\,\, 3261\ \, 0.\,\, 1021\ \, 0.\,\, 0469\ \, 0.\,\, 0293\ \, 0.\,\, 0029\ \, 0.\,\, 0024\ \, 0.\,\, 0018\ \, 0.\,\, 0065\ \, 0.\,\, 0077\ \, 0.\,\, 0084$ 

0. 0298 0. 0015 0. 0007 0. 0060

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\ 2940\ 0.\ 0882\ 0.\ 2938\ 0.\ 0925\ 0.\ 0425\ 0.\ 0595\ 0.\ 0059\ 0.\ 0049\ 0.\ 0037\ 0.\ 0133\ 0.\ 0157\ 0.\ 0170$ 

 $0.\ 0606\ 0.\ 0030\ 0.\ 0014\ 0.\ 0040$ 

AVERAGE SPEED : 53 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban freeway mix and speeds

gui 130

VMT FRACTIONS

 $0.\,\,3220\,\,\,0.\,\,0959\,\,\,0.\,\,3191\,\,\,0.\,\,1000\,\,\,0.\,\,0460\,\,\,0.\,\,0367\,\,\,0.\,\,0036\,\,\,0.\,\,0030\,\,\,0.\,\,0023\,\,\,0.\,\,0082\,\,\,0.\,\,0097\,\,\,0.\,\,0105$ 

0. 0374 0. 0018 0. 0009 0. 0029

AVERAGE SPEED : 54 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3310\ \ 0.\ 0986\ \ 0.\ 3284\ \ 0.\ 1028\ \ 0.\ 0473\ \ 0.\ 0286\ \ 0.\ 0028\ \ 0.\ 0024\ \ 0.\ 0018\ \ 0.\ 0064\ \ 0.\ 0075\ \ 0.\ 0082$ 

 $0.0292 \ 0.0014 \ 0.0007 \ 0.0029$ 

AVERAGE SPEED : 28 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 3370\ \ 0.\ 1012\ \ 0.\ 3368\ \ 0.\ 1055\ \ 0.\ 0485\ \ 0.\ 0215\ \ 0.\ 0021\ \ 0.\ 0018\ \ 0.\ 0013\ \ 0.\ 0048\ \ 0.\ 0057\ \ 0.\ 0062$ 

 $0.\ 0220\ 0.\ 0011\ 0.\ 0005\ 0.\ 0040$ 

AVERAGE SPEED : 31 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

 $0.\ 3410\ 0.\ 1021\ 0.\ 3399\ 0.\ 1069\ 0.\ 0491\ 0.\ 0187\ 0.\ 0018\ 0.\ 0015\ 0.\ 0012\ 0.\ 0042\ 0.\ 0049\ 0.\ 0053$ 

0.0190 0.0009 0.0004 0.0031

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

0. 3330 0. 0993 0. 3307 0. 1041 0. 0479 0. 0254 0. 0025 0. 0021 0. 0016 0. 0057 0. 0067 0. 0073

0.0259 0.0013 0.0006 0.0059

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

END OF RUN :

# gui 130n

## MOBILE6 INPUT FILE:

> Guilford County 2030 conformity determination Non-I/M

POLLUTANTS : HC NOX

RUN DATA :

\*\*\*\*\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

FUEL RVP : 7.8

MIN/MAX TEMP : 66.0 89.0

REG DIST : triadage.prn

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 2540\ 0.\ 0758\ 0.\ 2522\ 0.\ 0795\ 0.\ 0365\ 0.\ 0955\ 0.\ 0094\ 0.\ 0079\ 0.\ 0059\ 0.\ 0214\ 0.\ 0252\ 0.\ 0273$ 

 $0.\ 0974\ 0.\ 0048\ 0.\ 0022\ 0.\ 0050$ 

AVERAGE SPEED : 56 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\,\, 3090\,\,\, 0.\,\, 0919\,\,\, 0.\,\, 3061\,\,\, 0.\,\, 0959\,\,\, 0.\,\, 0441\,\,\, 0.\,\, 0479\,\,\, 0.\,\, 0047\,\,\, 0.\,\, 0040\,\,\, 0.\,\, 0030\,\,\, 0.\,\, 0107\,\,\, 0.\,\, 0126\,\,\, 0.\,\, 0137\,\, 0.0040\,\,\,$ 

 $0.0488 \ 0.0024 \ 0.0011 \ 0.0041$ 

AVERAGE SPEED : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural minor arterial mix and speeds

VMT FRACTIONS

 $0.\,\,3180\,\,\,0.\,\,0949\,\,\,0.\,\,3161\,\,\,0.\,\,0993\,\,\,0.\,\,0457\,\,\,0.\,\,0389\,\,\,0.\,\,0038\,\,\,0.\,\,0032\,\,\,0.\,\,0024\,\,\,0.\,\,0087\,\,\,0.\,\,0103\,\,\,0.\,\,0111$ 

 $0.0397 \ 0.0020 \ 0.0009 \ 0.0050$ 

AVERAGE SPEED : 41 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural major collector mix and speeds

VMT FRACTIONS

 $0.\,\, 3280\ \, 0.\,\, 0977\ \, 0.\,\, 3253\ \, 0.\,\, 1021\ \, 0.\,\, 0469\ \, 0.\,\, 0309\ \, 0.\,\, 0030\ \, 0.\,\, 0026\ \, 0.\,\, 0019\ \, 0.\,\, 0069\ \, 0.\,\, 0081\ \, 0.\,\, 0088$ 

0. 0315 0. 0016 0. 0007 0. 0040

# gui 130n

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\,\,3280\,\,\,0.\,\,0977\,\,\,0.\,\,3253\,\,\,0.\,\,1021\,\,\,0.\,\,0469\,\,\,0.\,\,0306\,\,\,0.\,\,0030\,\,\,0.\,\,0025\,\,\,0.\,\,0019\,\,\,0.\,\,0068\,\,\,0.\,\,0081\,\,\,0.\,\,0087\,\,\,0.\,\,0011\,\,\,0.\,\,0015\,\,0.\,\,0015\,\,\,0.\,\,0015\,\,\,0.\,\,0015\,\,0$ 

 $0.\ 0311\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 45 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

 $0.\,\, 3300\ \, 0.\,\, 0979\ \, 0.\,\, 3261\ \, 0.\,\, 1021\ \, 0.\,\, 0469\ \, 0.\,\, 0293\ \, 0.\,\, 0029\ \, 0.\,\, 0024\ \, 0.\,\, 0018\ \, 0.\,\, 0065\ \, 0.\,\, 0077\ \, 0.\,\, 0084$ 

 $0.\ 0298\ 0.\ 0015\ 0.\ 0007\ 0.\ 0060$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*\*
SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\ 2940\ 0.\ 0882\ 0.\ 2938\ 0.\ 0925\ 0.\ 0425\ 0.\ 0595\ 0.\ 0059\ 0.\ 0049\ 0.\ 0037\ 0.\ 0133\ 0.\ 0157\ 0.\ 0170$ 

 $0.\ 0606\ 0.\ 0030\ 0.\ 0014\ 0.\ 0040$ 

AVERAGE SPEED : 53 Non-Ramp 100.0 0.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

 $0.\ 3220\ 0.\ 0959\ 0.\ 3191\ 0.\ 1000\ 0.\ 0460\ 0.\ 0367\ 0.\ 0036\ 0.\ 0030\ 0.\ 0023\ 0.\ 0082\ 0.\ 0097\ 0.\ 0105$ 

0.0374 0.0018 0.0009 0.0029

AVERAGE SPEED : 54 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 3310\ 0.\ 0986\ 0.\ 3284\ 0.\ 1028\ 0.\ 0473\ 0.\ 0286\ 0.\ 0028\ 0.\ 0024\ 0.\ 0018\ 0.\ 0064\ 0.\ 0075\ 0.\ 0082$ 

gui l 30n

 $0.0292 \ 0.0014 \ 0.0007 \ 0.0029$ 

AVERAGE SPEED : 28 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

0. 3370 0. 1012 0. 3368 0. 1055 0. 0485 0. 0215 0. 0021 0. 0018 0. 0013 0. 0048 0. 0057 0. 0062

 $0.\ 0220\ 0.\ 0011\ 0.\ 0005\ 0.\ 0040$ 

AVERAGE SPEED : 31 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

 $0.\ 3410\ \ 0.\ 1021\ \ 0.\ 3399\ \ 0.\ 1069\ \ 0.\ 0491\ \ 0.\ 0187\ \ 0.\ 0018\ \ 0.\ 0015\ \ 0.\ 0012\ \ 0.\ 0042\ \ 0.\ 0049\ \ 0.\ 0053$ 

 $0.\ 0190\ \ 0.\ 0009\ \ 0.\ 0004\ \ 0.\ 0031$ 

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2030 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

 $0.\,3330\,\,\,0.\,0993\,\,\,0.\,3307\,\,\,0.\,1041\,\,\,0.\,0479\,\,\,0.\,0254\,\,\,0.\,0025\,\,\,0.\,0021\,\,\,0.\,0016\,\,\,0.\,0057\,\,\,0.\,0067\,\,\,0.\,0073$ 

 $0.\ 0259\ 0.\ 0013\ 0.\ 0006\ 0.\ 0059$ 

AVERAGE SPEED : 32 Arterial 0.0 100.0 0.0 0.0

END OF RUN :

# guil04 old SIP temps

## MOBILE6 INPUT FILE:

> Guilford County 2004 conformity determination

> 2000 Veh Age Dist.

**POLLUTANTS** : HC NOX

**RUN DATA** 

\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

**FUEL RVP** : 7.8

: 68.0 94.0 MIN/MAX TEMP

**REG DIST** : tri adage. prn

I/M PROGRAM : 1 1983 2050 1 TRC IDLE

I/M MODEL YEARS

: 1 1975 1995 : 1 22222 2222222 1 I/M VEHICLES

I/M STRINGENCY : 1 10.0 : 1 95.0 I/M COMPLIANCE I/M WAIVER RATES : 1 5.0 5.0

I/M PROGRAM : 2 2002 2050 1 TRC OBD I/M

I/M MODEL YEARS : 2 1996 2050

: 2 22222 111111111 1 I/M VEHICLES

I/M STRINGENCY : 2 10.0 I/M COMPLIANCE : 2 95.0 I/M WAIVER RATES : 2 5.0 5.0

: 3 2002 2050 1 TRC EVAP OBD I/M PROGRAM

: 3 1996 2050 I/M MODEL YEARS

I/M VEHICLES : 3 22222 11111111 1

I/M STRINGENCY : 3 10.0 : 3 95.0 I/M COMPLIANCE I/M WAIVER RATES : 3 5.0 5.0

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111

: Rural interstate SCENARIO RECORD

CALENDAR YEAR : 2004 EVALUATION MONTH

> Rural interstate mix and speeds

VMT FRACTIONS

 $0.\ 3670\ 0.\ 0566\ 0.\ 1884\ 0.\ 0589\ 0.\ 0271\ 0.\ 0959\ 0.\ 0095\ 0.\ 0075$  $0.\ 0057\ 0.\ 0212\ 0.\ 0251\ 0.\ 0274\ 0.\ 0977\ 0.\ 0048\ 0.\ 0022\ 0.\ 0050$ 

AVERAGE SPEED : 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0

\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2004

EVALUATION MONTH

> Rural other principle arterial mix and speeds

VMT FRACTIONS

 $0.\ 4450\ 0.\ 0686\ 0.\ 2284\ 0.\ 0719\ 0.\ 0331\ 0.\ 0481\ 0.\ 0048\ 0.\ 0038$  $0.\ 0028\ 0.\ 0106\ 0.\ 0126\ 0.\ 0137\ 0.\ 0490\ 0.\ 0024\ 0.\ 0011\ 0.\ 0041$ 

AVERAGE SPEED : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

guil04 old SIP temps
SCENARIO SECTION \*\*\*\*\*\*\*\* SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2004

**EVALUATION MONTH** 

> Rural minor arterial mix and speeds

VMT FRACTIONS

 $0.\ 4560\ 0.\ 0714\ 0.\ 2376\ 0.\ 0747\ 0.\ 0343\ 0.\ 0391\ 0.\ 0039\ 0.\ 0031$  $0.0023 \ 0.0086 \ 0.0102 \ 0.0112 \ 0.0398 \ 0.0020 \ 0.0009 \ 0.0049$ 

AVERAGE SPEED : 42 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\*\*

: Rural major collector SCENARIO RECORD

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural major collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural minor collector mix and speeds

VMT FRACTIONS

 $0.\ 4720\ 0.\ 0730\ 0.\ 2430\ 0.\ 0767\ 0.\ 0353\ 0.\ 0307\ 0.\ 0030\ 0.\ 0024$  $0.\ 0018\ 0.\ 0068\ 0.\ 0080\ 0.\ 0088\ 0.\ 0312\ 0.\ 0015\ 0.\ 0007\ 0.\ 0051$ 

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\*\*

: Rural local SCENARIO RECORD

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Rural local mix and speeds

VMT FRACTIONS

**AVERAGE SPEED** : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO SECTION \*\*\*\*\*\* SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2004

**EVALUATION MONTH** 

> Urban interstate mix and speeds

VMT FRACTIONS

 $0.\ 4260\ 0.\ 0658\ 0.\ 2192\ 0.\ 0685\ 0.\ 0315\ 0.\ 0597\ 0.\ 0059\ 0.\ 0047$  $0.\ 0035\ 0.\ 0132\ 0.\ 0157\ 0.\ 0171\ 0.\ 0608\ 0.\ 0030\ 0.\ 0014\ 0.\ 0040$ 

AVERAGE SPEED : 52 Non-Ramp 100. 0 0. 0 0. 0 0. 0

# guil04 old SIP temps

\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\* SCENARIO RECORD : Urban freeway CALENDAR YEAR : 2004 **EVALUATION MONTH** > Urban freeway mix and speeds VMT FRACTIONS  $0.\ 4650\ 0.\ 0714\ 0.\ 2376\ 0.\ 0747\ 0.\ 0343\ 0.\ 0368\ 0.\ 0036\ 0.\ 0029$  $0.\ 0022\ 0.\ 0081\ 0.\ 0096\ 0.\ 0105\ 0.\ 0375\ 0.\ 0019\ 0.\ 0009\ 0.\ 0030$ AVERAGE SPEED : 52 Non-Ramp 100. 0 0. 0 0. 0 0. 0 SCENARIO RECORD : Urban principle arterial CALENDAR YEAR : 2004 **EVALUATION MONTH** > Urban principle arterial mix and speeds VMT FRACTIONS  $0.\ 4780\ 0.\ 0735\ 0.\ 2445\ 0.\ 0767\ 0.\ 0353\ 0.\ 0287\ 0.\ 0028\ 0.\ 0023$  $0.\ 0017\ 0.\ 0064\ 0.\ 0075\ 0.\ 0082\ 0.\ 0293\ 0.\ 0015\ 0.\ 0007\ 0.\ 0029$ AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0 : Urban minor arterial SCENARIO RECORD CALENDAR YEAR : 2004 **EVALUATION MONTH** > Urban minor arterial mix and speeds VMT FRACTIONS

0. 4880 0. 0753 0. 2507 0. 0788 0. 0362 0. 0216 0. 0021 0. 0017 0. 0013 0. 0048 0. 0057 0. 0062 0. 0220 0. 0011 0. 0005 0. 0040

**AVERAGE SPEED** : 31 Arterial 0.0 100.0 0.0 0.0

: Urban collector SCENARIO RECORD

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Urban collector mix and speeds

VMT FRACTIONS

0. 4950 0. 0758 0. 2522 0. 0795 0. 0365 0. 0187 0. 0019 0. 0015  $0.\ 0011\ 0.\ 0041\ 0.\ 0049\ 0.\ 0053\ 0.\ 0191\ 0.\ 0009\ 0.\ 0004\ 0.\ 0031$ 

**AVERAGE SPEED** : 33 Arterial 0.0 100.0 0.0 0.0

: Urban local SCENARIO RECORD

CALENDAR YEAR : 2004 **EVALUATION MONTH** 

> Urban local mix and speeds

VMT FRACTIONS

 $0.4810 \ 0.0742 \ 0.2468 \ 0.0774 \ 0.0356 \ 0.0255 \ 0.0025 \ 0.0020$ 0.0015 0.0056 0.0067 0.0073 0.0260 0.0013 0.0006 0.0060

guil04 old SIP temps : 34 Arterial 0.0 100.0 0.0 0.0 AVERAGE SPEED

END OF RUN

# guil04n old SIP temps

## MOBILE6 INPUT FILE:

> Guilford County 2004 conformity determination Non-I/M with 2000 vehicle age

POLLUTANTS : HC NOX

RUN DATA :

\*\*\*\*\*\*\* RUN SECTION \*\*\*\*\*\*\*

REG DIST : triadage.prn

ANTI - TAMP PROG

91 68 50 22222 2222222 2 11 095. 22121111 \*\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*\*

SCENARIO RECORD : Rural interstate

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Rural interstate mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 55 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Rural principle arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Rural other principle arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 53 Non-Ramp 100. 0 0. 0 0. 0 0. 0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural minor arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Rural minor arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 42 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural major collector

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Rural major collector mix and speeds

VMT FRACTIONS

0. 4720 0. 0730 0. 2430 0. 0767 0. 0353 0. 0310 0. 0031 0. 0024 0. 0018 0. 0069 0. 0081 0. 0089 0. 0316 0. 0016 0. 0007 0. 0039

guil04n old SIP temps

AVERAGE SPEED : 43 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Rural minor collector

CALENDAR YEAR : 2004

EVALUATION MONTH: 7

> Rural minor collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Rural local

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Rural local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 44 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*

SCENARIO RECORD : Urban interstate

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban interstate mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 52 Non-Ramp 100.0 0.0 0.0 0.0

SCENARIO RECORD : Urban freeway

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban freeway mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 52 Non-Ramp 100. 0 0. 0 0. 0 0. 0

SCENARIO RECORD : Urban principle arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban principle arterial mix and speeds

VMT FRACTIONS

# guil04n old SIP temps

AVERAGE SPEED : 29 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban minor arterial

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban minor arterial mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 31 Arterial 0.0 100.0 0.0 0.0

\*\*\*\*\*\*\*\* SCENARIO SECTION \*\*\*\*\*\*\*
SCENARIO RECORD : Urban collector

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban collector mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 33 Arterial 0.0 100.0 0.0 0.0

SCENARIO RECORD : Urban local

CALENDAR YEAR : 2004 EVALUATION MONTH : 7

> Urban local mix and speeds

VMT FRACTIONS

AVERAGE SPEED : 34 Arterial 0.0 100.0 0.0 0.0

END OF RUN:

# **Appendix D: Description of Future Transportation Systems**

2004 Fiscally Constrained Highway Network
2014 Fiscally Constrained Highway Network
2020 Fiscally Constrained Highway Network
2030 Fiscally Constrained Highway Network
2030 Exempt Project List

Figure: Roadway Element Horizon Projects

Note: The long range transportation plan horizons years are defined in terms of the end of the calendar year. For example the first period, horizon year 2004, ends December 31, 2004.

# Greensboro 2030 Long Range Transportation Plan Roadway Projects, 2004 Horizon Year

2004												
ID	Facility	TIP#	Description / Extents	(miles)	# Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New / Revised Since Last Plan
AI	Wendover Avenue		Big Tree Way to Stanley Rd.	0.4	4 lane	6 lane	Major Arterial	Yes	No	Yes		
A2	US 29	R-984	16th St. to Rockingham county line (pavement rehab)	10.9	4 lane divided	4 lane divided	Freeway/Expressway	Yes	Yes	Yes		
A3	Southern Urban Loop (I-85)	I-2402	I-85 to Clapp Farm Rd.	14.7	N/A	6 lane freeway	Interstate	Yes	No	Yes		
A4	I-40 / US 421	I-2201	Bus 40 to W of Freeman Mill Rd.	10.9	4 lane freeway	8 lane freeway	Interstate	Yes	No	Yes		
A5	Norwalk Street Extension	P-3416	Lee Street to Boston Road (rail crossing closing project)	0.3	N/A	3 lane	Local	No	No	Yes		New?

# Greensboro 2030 Long Range Transportation Plan Roadway Projects, 2014 Horizon Year 2005-2014

2005-20	014											
ID	Facility	TIP#	Description / Extents	(miles)	# Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New / Revised Since Last Plan
B1	New Garden Road		Existing widening to Brassfield Rd.	1.0	2 lane	4-5 lane	Minor Arterial	No	No	Yes		
B2	Friendly Avenue		Westridge Rd. to Holden Rd., add medians & LT lanes	1.4	4 lane	4-5 lane	Minor Arterial	No	No	Yes		
В3	Creek Ridge Road		Randleman Rd. to US 220	1.2	2 lane		Collector	No	No	Yes		
B4	Franklin Blvd/Florida St Connector		McConnell Rd. to Lee St.	0.6	2 lane	3-4 w/ median	Collector	No	No	Yes		Revised
B5	Elm-Eugene Street		Vandalia Rd. to Southern Urban Loop (I-85 Bypass)	0.8	2 lane		Minor Arterial	No	No	Yes		Revised
В6	US 220	R-2309	Horsepen Creek Rd. to US 220 - NC 68 Connector	6.3	2 lane	4-5 lane	Principal Arterial	Yes	No	Yes		
B7	Mackay Road		High Point Rd. to Adams Farm Pkwy.	0.5	2 lane	5 lane	Collector	No	No	Yes		
B8	Battleground Avenue		Cotswold Ave. to Westridge Rd.	1.3	5 lane	6-7 lane	Principal Arterial	Yes	No	Yes		
В9	Stanley Road		Koger Blvd. to Hilltop Rd.	1.1	2 lane	5 lane	Collector	No	No	Yes		
B10	Church Street		Cone Blvd. to Northwood St.	1.5	3 lane	5 lane	Collector	No	No	Yes		
B11	Horsepen Creek - Fleming Connector		Horse Pen Creek Rd. to Fleming Rd. (includes extending existing x-sections)	0.7	N/A	. 3 lane	Collector	No	No	Yes		Revised
B12	Vandalia Road		Elm-Eugene St. to Pleasant Garden Rd.	1.0	2 lane	5 lane	Minor Arterial	No	No	Yes		
B13	Summit Avenue		McKnight Mill Rd. to Brightwood School Rd.	2.3	2 lane	4-5 lane	Minor Arterial	No	No	Yes		X-sect
B14	Summit Avenue		Bryan Park to Eckerson Rd.	0.8	2 lane		Minor Arterial	No	No	Yes		X-sect
B15	West Market Street	R-2611	NC 68 to Bunker Hill Rd. in Colfax	3.6	2 lane	4-5 lane	Major Collector	Yes	No	Yes		
B16	Gallimore Dairy Road	U-4015 (part)	NC 68 to I-40	1.0	2 lane		Collector	No	No	Yes		
B17	Western Urban Loop	U-2524 (part)	I-85 to Lawndale Dr.	15.0	N/A	6 lane freeway	Interstate	Yes	No			
B18	Chimney Rock Rd Extension	U-2524 (part)	Existing facility to Old Oak Ridge Rd	1.3	N/A	2 lane	Local	No	No	Yes		Revised
B19	NC 68 / US 220 Connector	R-2413 (part)	Pleasant Ridge Rd. to US 220 + widening to Rockingham Co. line	9.8	N/A	4 lane freeway	Interstate	Yes	No	Yes		
B20	Merritt Drive		I-40 to High Point Rd.	1.0	3 lane	5 lane	Collector	No	No	Yes		
B21	Guilford College Road	U-2913 (part)	Widening (from Ruffin Rd to new alignment)	2.3	2 lane	4-5 lane	Minor Arterial	Yes	No	Yes		
		* /	New alignment (from widening to High Point Rd.)	1.5	NA	4 lane divided	Minor Arterial	Yes	No	Yes		
B22	Hilltop Road	U-3612 (part)	Guilford College Rd. to Adams Farm Pkwy.	0.6	2 lane	4-5 lane	Minor Arterial	No	No	Yes		
B23	High Point Road		Hilltop Rd. to Proposed US 311 Bypass (portion in High Point)	3.8	3 lane	4-5 lane	Principal Arterial	Yes	No	Yes		
B24	Groometown Road	U-3313	Wiley Davis Rd. to Wayne Rd.	1.2	2 lane	4-5 lane	Minor Arterial	No	No	Yes		
B25	Bridford Parkway Extension	U-4006	Wendover Ave. at Hornaday Rd. to Burnt Poplar Rd. at Swing Rd.	1.1	N/A		Collector	No	No	Yes		
B26	Hornaday Road / Chimney Rock Road Connector		Hornaday Rd. to Chimney Rock Rd.	1.0	N/A	3 lane	Local	No	No	Yes		Revised
B27	Hornaday Road / Chimney Rock Road Connector	U-2524 (part)	Bridge over Outer Loop	N/A	N/A	N/A	N/A	No	No	Yes		Revised
B28	Reedy Fork Service Rd		Turner-Smith Rd Ext to Reedy Fork Parkway	1.4	N/A	5	Local	No	No	Yes		New
B29	Reedy Fork Parkway		Turner-Smith Rd Ext to Eckerson Rd.	2.2		3	Local	No	No	Yes		New
B30	Turner Smith Road extension		Connect Brown Summit Rd. to Turner Smith Rd.	2.0	N/A	3 lane	Major Collector	No	No	Yes		New
B31	Lake Jeanette Road		Lawndale Ave. to N Elm St. / Bass Chapel Rd.	2.0	2 or 3 lane	3-5 lane	Local	No	No	Yes		Revised
B32	East Market Street		Streetscape and Traffic Management		6 lane divided	4 lane divided	Principal Arterial	No	Yes	Yes		New
B33	Lake Brandt / Cotswold Connector	U-2524 (part)	Lake Brandt Rd. to Cotswold Rd.	0.3	3 lane	3 lane	Collector	No	No	Yes		Revised
B34												
B35	US 421	R-2612 (part)	Williams Dairy / Neely Rd realignment & interchange	1.2	2 lane	3-5 lane	Freeway/Expressway & Collector	Yes	No	Yes	Yes (interchange)	Revised
B36	US 29	R-4707	Eckerson Rd. / US 29 Interchange + 1 mile of freeway upgrade (Assumes U-2524 includes widening of remaining US 29 south to Urban Loop)	1.0	4 lane freeway	6 lane freeway	Freeway/Expressway	Yes	No	Yes		Revised
B37	Greensboro Signal / ITS System	U-4711		N/A	N/A	N/A	N/A	No	Yes	No	Yes	
B38												
B39	East Cone Boulevard Extension		Nealtown Rd. to Hines Chapel Rd.	2.0	N/A	4 lane divided	Minor Arterial	Yes	No	Yes		X-sect
B40	Bryan Boulevard	U-2815 C	Inman Rd. to NC 68 (relocate roadway)	1.9	4 lane divided	4 lane divided	Freeway/Expressway	Yes	No	Yes		Revised
B41	Holts Chapel Road Upgrade		Alignment & X-section improvements, E Market St to Ward Rd	1.6	2 lane	2-3 lane	Collector	No	No	Yes		Revised
B42	Pegg / Thatcher / Brigham Road Ext. (SEE B50)		Gallimore Dairy Rd. to Market St. (new & existing, part in High Point)	4.0	N/A	4 lane divided	Collector	No	No	Yes		New
B43	Bryan Boulevard Extension		NC 68 to Pleasant Ridge Rd.	0.8	N/A		Major Collector	No	No	Yes		X-sect, Funct Class
B44	Sandy Ridge Road		I-40 to Market St.	1.0				No	No	Yes		
B45	Alamance Church Road		US 421 to SE of Southeast School Rd	4.7	2 lane			Yes	No	Yes		Longer
B46	Gallimore Dairy Road	U-4015 (part)	I .	0.6	2 lane			No	No	Yes		
B47	Hilltop Road		Widen from Adams Farm Pkwy to Stanley Rd.	1.3	2 lane			No	No	Yes		
B48	Guilford College Rd	U-2913 (part)	Widen from Hornaday Rd. to Ruffin Rd.	1.1	2 lane	4-5 lane	Minor Arterial	Yes	No	Yes		
B49	Norwalk Street Connector											
B50	Brigham Road		Widen from Market Street to Pleasant Ridge									
B51	Regional Rd. Extension											

# Greensboro 2030 Long Range Transportation Plan Roadway Projects, 2020 Horizon Year

2015-20	)20											
ID	Facility	TIP#	Description / Extents	(miles)	# Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New / Revised Since Last Plan
C1	US 158	R-2577 (part)	Forsyth Co Line - US-220 (in conjunction w/ Bypass)	4.6	2 lane	4-5 lane	Minor Arterial	Yes	No	Yes		Revised
			(remainder of the project lies in Forsyth and Rockingham Cos.)									
C2	US 70	R-2910 (part)	Rock Creek Dairy Rd. to Alamance County Line (.3 to MAB)	0.3	2 lane	5 lane	Major Collector	Yes	No	Yes		
			(remainder of the project lies in Alamance Co.)									
C3	US 70	U-2581	Mt Hope Church Rd. to Rock Creek Dairy Rd.	5.2	2 lane	5 lane	Minor Arterial	Yes	No	Yes		
C4	Fleming Road / Lewiston Road		Fleming Rd. to Lewiston Rd. connection and interchange at Urban Loop	0.6	N/A	4-5 lane	Freeway/Expressway & Minor Arterial	Yes	No	Yes		X-section
C5	Horsepen Creek Road		New Garden Rd. to Battleground Ave.	3.4	2 lane	4-5 lane	Collector	No	No	Yes		X-section
C6	Summit Avenue		Brightwood School Rd. to Bryan Park	2.6	2 lane	3-5 lane	Minor Arterial	No	No	Yes		
C7	Eastern Urban Loop	U-2525 (part)	Lawndale Dr. to US 70	13.0	N/A	6 lane freeway	Interstate	Yes	No	Yes		
C8	E Cone Blvd / Urban Loop Interchange		Interchange with East Cone Blvd. and Urban Loop	N/A	N/A	N/A	Interstate	Yes	No	Yes		
C9	I-40 / NC 68 / I-73 Connector		Old Oakridge Rd. to I-40, & widen existing Bryan Blvd. To Urban Loop	7.6	N/A	4-6 lane freeway	Interstate	Yes	No	Yes		Revised
C10	NC 150 Realignment		Brookbank Rd. to Summerfield Rd.	1.9	N/A	2 lane	Major Collector	No	No	Yes		Revised
C11	Hicone Road Extension		Lee's Chapel Rd. to Summit Ave.	0.8	N/A	3 lane	Minor Arterial	No	No	Yes		
C12	Carmon / McLeansville Road Connector		Know Rd. to McLeansville Rd.	1.1	N/A	2 lane	Collector	No	No	Yes		New
C13	Gallimore Dairy Road / Friendly Avenue		Realign for continuity	0.2	5 lane	5 lane	Minor Arterial	No	No	Yes		
C14	Ritters Lake Road Realignment		Connect with Wolfetrail at Ranldleman Rd.	0.4	2 lane	3 lane	Minor Arterial	No	No	Yes		New
C15	Sandy Ridge Road Extension		Market St. to Airport Connector and Interchange at Market St.	1.0	N/A	4 lane divided	Major Collector	Yes	No	Yes		Revised
C16												
C17	Lewiston / Pleasant Ridge Roads		Urban Loop to Realigned NC 150	5.0	2 lane	5 lane	Major Collector	Yes	No	Yes		Revised
C18	Vandalia Road Extension		Pleasant Garden Rd. to Alamance Church Rd. + US 421 I/C	2.7	N/A	3 lane	Freeway/Expressway & Minor Arterial	Yes	No	Yes		
C19	South Holden Road		Old Randleman Road to existing widening	1.9	2 lane	4-5 lane	Minor Collector	No	No	Yes		New
C20	NC 150		NC 68 to Lake Brandt Rd. (excludes new location)	7.5	2 lane	3 lane	Major Collector	No	No	Yes		New
C21	Pleasant Ridge Road		Market St. to Lewiston Rd.	8.0	2 lane	3 lane	Major Collector	No	No	Yes		Revised

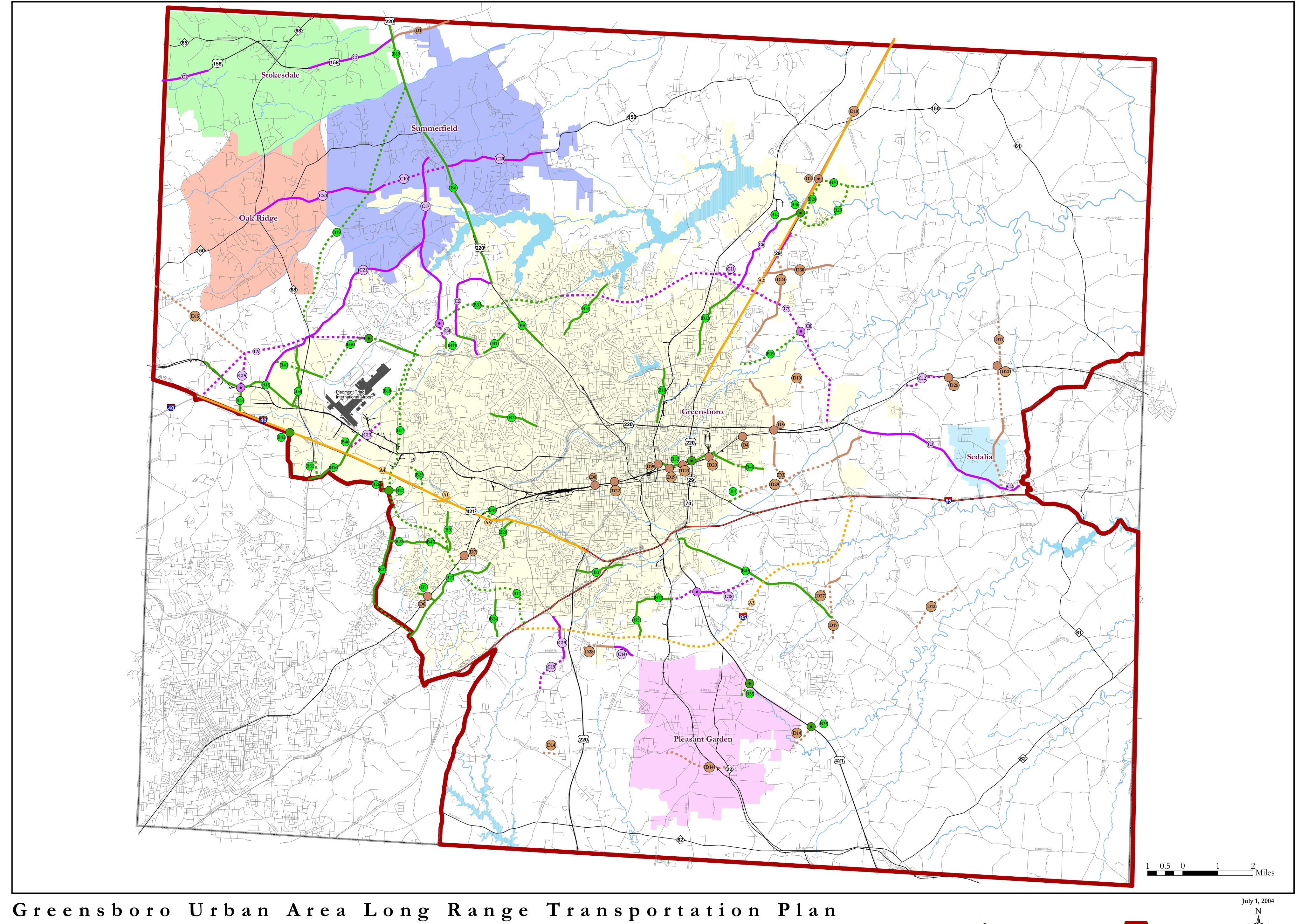
# Greensboro 2030 Long Range Transportation Plan Roadway Projects, 2030 Horizon Year

2021-20	030											
ID	Facility	TIP#	Description / Extents	(miles)	# Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New / Revised Since Last Plan
D1	US 158	R-2580 (part)	US 220 - Rockingham Co Line (remainder of the project lies in Rockingham Co.)	1.5	2 lane	e 4-5 lane	Minor Arterial	Yes	No	Yes		Revised
D2	US 29		New SPUI (@ Brown Summit/Turner Smith Connector).	N/A	N/A	N/A	Interstate	Yes	No	Yes		New
D3	Penry / Ward / Youngs Mill Connector		McConnell Rd. to Huffine Mill Rd. (realign & improve existing)	3.1	2 lane	3 lane	Major Collector	Yes	No	Yes		New
D4	Franklin Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D5	Ward Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D6	Mackay Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D7	Hilltop Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D8	Aycock Street		Railroad underpass replacement (in conjunction with PART)	N/A	N/A	N/A	N/A	No	Yes	N/A		
D9	East Market Street		Railroad underpass replacement (in conjunction with PART)	N/A	N/A	N/A	N/A	No	Yes	N/A		
D10	Rankin Mill / Flemingfield Connector		South of Keeley Rd. Huffine Mill Rd.	0.7	2 lane	3 lane	Collector	No	No	Yes		New
D11	High Rock Road Extension		US 70 to Frienden Church Rd. (connect & improve existing facilities)	5.5	2 lane	2 lane	Collector	No	No	Yes		New
D12	Wades Store Road Extension		Mt. Hope Church Rd. to Alamance Church Rd.	1.7	2 lane	2 lane	Local	No	No	Yes		New
D13												
D14	Burnetts Chp / Steeple Chase / Hagen Stone Pk Connector	R-2612 (part)	Burnetts Chapel Rd. to Company Mill Rd., new & existing + US 421 I/C	5.2	2 lane	2 lane	Freeway/Expressway & Collector	Yes	No	Yes	Yes (interchange)	Revised
D15	Airport Connector		Sandy Ridge Rd Ext (at I-73 Connector) to Forsyth Co (continues to Winston-Salem Urban Loop / I-74)	3.7	N/A	4 lane freeway	Freeway/Expressway	Yes	No	Yes		Revised
<del>D16</del>												
D17	Youngs Mill / Southeast School Connector		Millpoint Rd. to Southeast School Rd.	1.2	N/A		Minor Arterial	Yes	No	Yes		
D18	US 29		Widen & upgrade to interstate, N of Reedy Creek to Rockingham Co. line	5.5	4 lane freeway		Interstate	Yes	No	Yes		
D19	South Dudley Street		Railroad grade separation	N/A	N/A			No	Yes	N/A		
D20	South English Street		Railroad grade separation	N/A	N/A			No	Yes	N/A		
D21	Colony Road		Railroad grade separation	N/A	N/A			No	Yes	N/A		
D22	Tate Street		Railroad grade separation	N/A	N/A			No	Yes	N/A		
D23	Benbow Road		Railroad grade separation	N/A	N/A	N/A		No	Yes	Yes		New
D24	Nealtown Rd / McKnight Mill Rd Connector and Extension		Huffine Mill Rd. to Eckerson Rd. (connect & improve existing facilities)	4.0	2 lane	2-3 lane	Major Collector	No	No	Yes		New
D25	Knox Road Extension		Carmon to Frieden Church Rd., w/ RR grade separation	0.3	N/A	2 lane	Collector	No	No	Yes		New
D26												
D27	Williams Dairy / Millpoint Road Connector		Millpoint Rd. to Williams Dairy Rd.	0.6	N/A	2 lane	Collector	No	No	Yes		
D28	Bishops Road - Ritters Lake Road Connector		S. Holden Road (Drummond Rd) to Wolfetrail Road (Old Randleman Rd)	0.8	2 lane	3 lane		No	No	Yes		New
D29	Florida St Extension		Franklin Blvd Extension to McLeansville Rd (new & improve existing)	4.0		4 divided	Major Collector	Yes	No	Yes		New
D30	Hicone Rd. Widening		US 29 to Hines Chapel Rd,	3.3	2 lane	5 lane	Minor Arterial	No	No	Yes		New
D31												

# Greensboro 2030 Long Range Transportation Plan

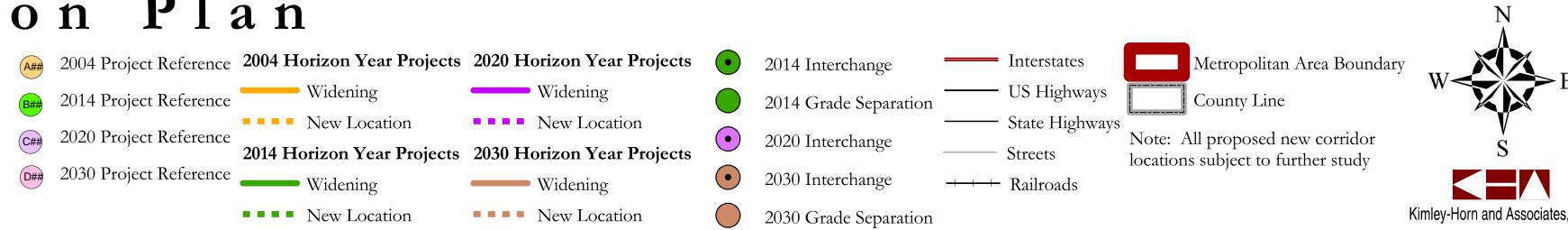
**Exempt Project List** 

ID	Facility	TIP#	Description / Extents	(miles)	# Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	смаQ	New / Revised Since Last Plan
2004 Horizon Year												
A2	US 29	R-984	16th St. to Rockingham county line (pavement rehab)	10.9	4 lane divided	4 lane divided	Freeway/Expressway	Yes	Yes	Yes		
A6	Spring Garden Street Median		Between Freeman Mill Rd. and Jackson St.	0.3	4 and 2 lane	Divided	Collector	No	Yes	No		
2014 Horizon Year												
B32	East Market Street		Streetscape and Traffic Management		6 lane divided	4 lane divided	Principal Arterial	No	Yes	Yes		New
B34	Old Battleground Avenue		Street closure	0.1	N/A	N/A	N/A	No	Yes	Yes		New
B37	Greensboro Signal / ITS System	U-4711		N/A	N/A	N/A	N/A	No	Yes	No	Yes	
B38	Church Street		Streetscape, Lindsay St. to Friendly Ave.	0.3	N/A	N/A	Collector	No	Yes	No		
2030 Horizon Year												
D4	Franklin Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D5	Ward Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D6	Mackay Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D7	Hilltop Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D8	Aycock Street		Railroad underpass replacement (in conjunction with PART)	N/A	N/A	N/A	N/A	No	Yes	N/A		
D9	East Market Street		Railroad underpass replacement (in conjunction with PART)	N/A	N/A	N/A	N/A	No	Yes	N/A		
D19	South Dudley Street		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D20	South English Street		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D21	Colony Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D22	Tate Street		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A		
D23	Benbow Road		Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	Yes		New



Horizon Year Projects

Horizon Year Project Reference 2004 Project Reference 2014 Project R



#### Greensboro MPO/High Point MPO/Davidson County-rural Long Range Transportation Plan (LRTP) Project List Review Meeting (3/16/04) Meeting Notes

Meeting Attendees: Tyler Meyer-Greensboro MPO (by phone), Jeff Sovich-Greensboro MPO (by phone), Monica Kerr-NCDOT, Kimberly Hinton-NCDOT, Heather Hildebrandt-NCDENR, Behshad Norowzi-NCDOT, Don Bryson-MAB, Nathaniel Grier-MAB, Eddie Dancausse-FHWA, Bill Marley-FHWA

#### Greensboro MPO Project List Review

#### NCDENR comments:

Greensboro needs to re-examine projects (on the project list) that are minor arterial and above to determine if they are regionally significant or not. Some inconsistencies were noticed on the list (i.e., project ID B20 and B21).

#### FHWA comments:

I recommend a separate list showing the exempt projects

Is there a project list for 2004? Are there any projects in 2004 that will not be completed by Oct 2004?

Why are the following projects exempt? Project ID# B2, B5, B34

Projects in the TIP and not in the LRTP I-2201, I-3606, I-4715, I-2402, R-952, R-4403, R-984, R-2808, U-2815, U-3314, there are a number of bridge projects, etc.

Projects in LRTP and not in TIP

Project ID# B1, B2, B3, B4, B5, B6, B8, B9, B10, B11, B12, B13, B14, B15, B20, B26, B27, B28, B29, B30, B31, B32, B33, B34, B38, B39, B41, B42, B43, B44, B45

#### Mileage differences between TIP and LRTP

- · Project U-4015: TIP mileage is 1.6 and LRTP mileage is 1.2
- · Project U2524: TIP mileage is 0 and LRTP mileage is 1.3
- Project R-2413: TIP mileage is 12.4 and LRTP mileage is 9.8
- · Project U-2913: TIP mileage is 4.5 and LRTP mileage is 1.0
- · Project R-4707: TIP mileage is 0 and LRTP mileage is 1.0
- Project R-2577: TIP mileage is 18.8 and LRTP mileage is 4.6
   Project R-2910: TIP mileage is 5.4 and LRTP mileage is 1.0
- Project U-2581: TIP mileage is 5.2 and LRTP mileage is 4.5
- Project C-2581: THe inheage is 3.2 and LRTP inheage is 4.5
   Project R-2580: TIP mileage is 15.0 and LRTP mileage is 1.5

\*\*\*\*Make sure that all federally funded projects that meet the requirements of 40 CFR 93.126 and 93.127 are included in the exempt project list\*\*\*\*.

#### Commitments:

- MAB will re-examine the list of projects (roads, functional classification, future volume, etc) to determine regional significance.
  - MAB will indicate (on the project list) any changes or corrections made to the projects.
  - MAB will provide responses to all FHWA and NCDENR comments by 3/25/04.
  - MAB will provide a revised project list to the meeting attendees by 3/19/04.

#### High Point MPO Project List Review

#### NCDENR comments:

- A Column needs to be added to denote exempt/ not exempt.
- Include in the description or in another column how the roadway is changing. (i.e. widening from 2 lanes to 4). This information will help me determine the scope of the project and also answer regional significance.
- 3. In many cases, there wasn't a listed functional classification.

Understandable in some instances, but not when it is an intersection, widening, etc. See: Map reference E, F, I, V, X, AE

4. Project X is an interchage. I believe this should be regionally significant.

5. Project AL is a fairly large project on a Minor Arterial. Why is it not regionally significant?

#### FHWA comments:

Why are the following projects not regionally significant?

- U-2536
- NC 109 from Interstate 85 to NC 47, Widen to multi-lane facility
- Southern Loop from existing Johnsontwn Rd. to Finch Farm Rd., New 2-lane facility
- Wallburg/High Point Road from west Lexington Avenue to NC 109, Widening to a multi-lane facility

#### Projects in LRTP and not in TIP

- U-2536
  - U-3335 is in LRTP and not in TIP

#### Mileage differences between TIP and LRTP

- Project R-2568: TIP mileage is 13.5 and LRTP mileage is 9.5
  - Project R-608: TIP mileage is 12.9 and LRTP mileage is 11.3
     Project U-2412: TIP mileage is 7.8 and LRTP mileage is 4.9
  - Project U-2913: TIP mileage is 4.5 and LRTP mileage is 4.9
    - Project U-2717: TIP mileage is 1.6 and LRTP mileage is 2.5
  - Project U-2568: TIP mileage is 13.5 and LRTP mileage is 5.9

- Project U-3615: TIP mileage is 12.9 and LRTP mileage is 6.7
- Project U-609: TIP mileage is 13.5 and LRTP mileage is 5.9
   Project U-2606: TIP mileage is 11.5 and LRTP mileage is 9.2
- Project U-4411: TIP mileage is 0.5 and LRTP mileage is 0.8
- Project U-3615: TIP mileage is 6.3 and LRTP mileage is 3.0

  Project U-3677: TIP mileage is 6.3 and LRTP mileage is 3.0

  Project U-3677: TIP mileage is 6.3 and LRTP mileage is 3.0

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  Project U-3677: TIP mileage is 6.3 and LRTP mileage is 3.0

  Project U-3677: TIP mileage is 6.3 and LRTP mileage is 6.3 an
- Project U-2537: TIP mileage is 10.5 and LRTP mileage is 3.0

#### Exempt Project List

Based on 40 CFR 93.126 & 93.127 the following projects are exempt:

• U-2702

- II-3122
- U-3434
- Trinity Road/Sealy Drive realignment, Realign both roadways so that the existing
  offset is eliminated
- MLK Dr./Jacobs St. extension/Business 85 interchange, Construction of a new interchange
- Mendenhall Rd./Mendenhall Rd. Ext. realignment, Realign both roadways so that
  the existing offset is eliminated

In my opinion the remainder of the projects in the exempt list are not exempt.

#### Projects in the TIP and not in the LRTP:

R-4403, I-4740, U-4015, B-4095, B-4096, B-3843, B-4334, B-4799, B-4100, B-4101, B-4742, B-4102, B-3834, B-4499, B-3847, B-3687, B-3688, B-3888, B-2857, B-3891, B-3892, B-3936, B-3893, B-3894, B-3895, B-3447, B-3448, B-3652, B-3931, B-4760, R-3034

\*\*\*\*Make sure that all federally funded projects that meet the requirements of 40 CFR 93.126 and 93.127 are included in the exempt project list\*\*\*\*.

#### Commitments:

- The NCDOT and the High Point MPO will re-examine the list of projects (roads,
- functional classification, future volume, etc) to determine regional significance.

  The NCDOT and the High Point MPO will indicate (on the project list) any changes or corrections made to the projects.
- The NCDOT and the High Point MPO will provide responses to all FHWA and NCDENR comments by 3/25/04.
- The NCDOT and the High Point MPO will provide a revised project list to the meeting attendees by 3/25/04.

#### Davidson County-rural Project List Review

The STIP is the transportation plan for Davidson County-rural. The list of projects for Davidson County-rural has not changed since the last conformity determination that was made on 10/1/03.

Subject: RE: Greensboro Comments

Date: Thu, 1 Apr 2004 11:06:38 -0500

From: "Dancausse, Edward" < Edward. Dancausse@fhwa.dot.gov>

To: "Don Bryson" <donbryson@mabtrans.com>

cc: "Meyer, Tyler (E-mail)" <tyler.meyer@ci.greensboro.nc.us>,

"Jeff Sovich (E-mail)" <jeffrey.sovich@greensboro-nc.gov>,

"Behshad Norowzi (E-mail)" <bnorowzi@dot.state.nc.us>,

"Heather Hildebrandt (E-mail)" <heather.hildebrandt@ncmail.net>,

"Kimberly Hinton (E-mail)" <khinton@dot.state.nc.us>,

"Dan Thomas (E-mail)" <danthomas@dot.state.nc.us>

Don,

The FHWA and NCDENR comments have been adequately addressed. I am going to forward the list and comments to EPA and FTA for there review and concurrence. I am going to ask for their comments by 4/16/04.

Thanks for your assistance and quick responses to our questions dealing with the project lists. I hope that the time table for the EPA/FTA review is acceptable.

If you have questions and/or concerns, please let me know.

Take care Eddie

Edward J. Dancausse Air Quality Specialist FHWA NC Division 919-856-4330 x112 919-856-4353(fax) edward.dancausse@fhwa.dot.gov www.fhwa.dot.gov/ncdiv/

----Original Message----

From: Don Bryson [mailto:donbryson@mabtrans.com]

Sent: Thursday, April 01, 2004 8:21 AM

To: Dancausse, Edward; Heather Hildebrandt (E-mail)

Subject: RE: Greensboro Comments

Just wondering if you had any feedback on our responses to you comments on our project list. We're trying to wrap things up in time for some meetings in Greensboro next week, if possible. And I know you want to get things finalized, too.

BTW, there is one long-range (2030) RR grade-separation being added to the list.

Thanks.

Martin/Alexiou/Bryson

Don Bryson, P.E.

1 of 4 8/9/2004 8:01 PM

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Principal
2414 Wycliff Road, Suite 101
Raleigh, NC 27607
(919) 881-1243
(919) 881-8081 (fax)
----Original Message----
From: Dancausse, Edward [mailto:Edward.Dancausse@fhwa.dot.gov]
Sent: Tuesday, March 30, 2004 10:00 AM
To: Heather Hildebrandt (E-mail)
Cc: Don Bryson (E-mail)
Subject: FW: Greensboro Comments
Importance: High
Heather,
Provided below are responses to your follow-up comments on the Greensboro
project list. Please review and let me know what you think.
Thanks
Eddie
Edward J. Dancausse
Air Quality Specialist
FHWA NC Division
919-856-4330 x112
919-856-4353(fax)
edward.dancausse@fhwa.dot.gov
www.fhwa.dot.gov/ncdiv/
----Original Message----
From: Don Bryson [mailto:donbryson@mabtrans.com]
Sent: Tuesday, March 30, 2004 9:17 AM
To: Stephen.Stansbery@kimley-horn.com; Marley, Bill; Kimberly Hinton
(E-mail); Behshad Norowzi (E-mail); Meyer, Tyler (E-mail); Jeff Sovich
(E-mail); Dancausse, Edward
Cc: Nathaniel Grier; Wilner, Marcus
Subject: RE: Greensboro Comments
Importance: High
```

Here are comments and our questions/responses. Also, please note that in the electronic version of the spreadsheet we e-mailed, there are explanatory notes in the cells with a red triangle in the upper right corner. Moving your cursor over the cell reveals the comment.

B32 is classified as a principal arterial and exempt. Principal Arterials are always regionally significant and not exempt. I think this is a mistake and the project (streetscape and traffic management) should be classified as just exempt.

I don't understand this comment. Some of my confusion may relate to whether "regionally significant" refers to the facility or to the project. We were treating the streetscape and traffic management project as not significant

2 of 4 8/9/2004 8:01 PM

regionally, and exempt because it does not add capacity, etc. How can we classify it as exempt if, as you say, "Principal Arterials are always regionally significant and not exempt"? Are you saying to change the functional class? If so, to what, and what would the extents of this change be? And can we do that?

Is Guilford College Road a major throughfare?

Why is C2 regionally significant? Is it because it is part of a more significant project that continues?

This is part of 2 projects for widening more than 10 miles of US 70. Only 0.3 miles of this particular project are in the Greensboro MPO; over 5 miles are in Burlington/Alamance (see note in spreadsheet). This project is a continuation of C3.

Project D2 does not contain a description of length of project or number of lanes. Please explain.

This project relates to the addition of an interchange only. Widening is addressed in projects D18 and B36.

Why is D30 not regionally significant? It is connecting to US29. As stated in the note, it does not appear this widening will significantly alter VMT, traffic patterns, etc, since the road already connects with US 29. But I would have no problem with calling it regionally significant.

Martin/Alexiou/Bryson

Don Bryson, P.E. Principal 2414 Wycliff Road, Suite 101 Raleigh, NC 27607

(919) 881-1243 (919) 881-8081 (fax)

----Original Message----

From: Dancausse, Edward [mailto:Edward.Dancausse@fhwa.dot.gov]

Sent: Monday, March 29, 2004 11:33 AM

To: Don Bryson (E-mail); Jeff Sovich (E-mail); Meyer, Tyler (E-mail); Behshad Norowzi (E-mail); Kimberly Hinton (E-mail); Marley, Bill

Cc: Wilner, Marcus

Subject: FW: Greensboro Comments

Don,

Attached are some follow-up comments from NCDENR. Please review and comment (if possible by the end of the week).

If you have any questions, contact me or Heather.

Thanks Eddie

Edward J. Dancausse Air Quality Specialist

3 of 4 8/9/2004 8:01 PM

FHWA NC Division 919-856-4330 x112 919-856-4353(fax) edward.dancausse@fhwa.dot.gov www.fhwa.dot.gov/ncdiv/

----Original Message----

From: Heather.Hildebrandt [mailto:Heather.Hildebrandt@ncmail.net]

Sent: Monday, March 29, 2004 9:35 AM

To: Dancausse, Edward

Subject: Greensboro Comments

Sorry, I am so late getting these to you. Gavin had a little relapse on Friday. Please forward as necessary. No show stoppers.

\_\_\_

Heather J. Hildebrandt Environmental Engineer NC Division of Air Quality

phone: 919-733-1498 fax: 919-733-1812

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

4 of 4



#### Comments on Greensboro 2030 Long Range Transportation Plan Project List

B32 is classified as a principal arterial and exempt. Principal Arterials are always regionally significant and not exempt. I think this is a mistake and the project (streetscape and traffic management) should be classified as just exempt.

Is Guilford College Road a major throughfare?

Why is C2 regionally significant? Is it because it is part of a more significant project that continues?

Project D2 does not contain a description of length of project or number of lanes. Please explain.

Why is D30 not regionally significant? It is connecting to US29.

#### Greensboro MPO response to NCDENR Comments

B32 is classified as a principal arterial and exempt. Principal Arterials are always regionally significant and not exempt. I think this is a mistake and the project (streetscape and traffic management) should be classified as just exempt.

I don't understand this comment. Some of my confusion may relate to whether "regionally significant" refers to the facility or to the project. We were treating the streetscape and traffic management project as not significant regionally, and exempt because it does not add capacity, etc. How can we classify it as exempt if, as you say, "Principal Arterials are always regionally significant and not exempt"? Are you saying to change the functional class? If so, to what, and what would the extents of this change be? And can we do that?

Is Guilford College Road a major throughfare? Yes.

Why is C2 regionally significant? Is it because it is part of a more significant project that continues?

This is part of 2 projects for widening more than 10 miles of US 70. Only 0.3 miles of this particular project are in the Greensboro MPO; over 5 miles are in Burlington/Alamance (see note in spreadsheet). This project is a continuation of C3.

Project D2 does not contain a description of length of project or number of lanes. Please explain.

This project relates to the addition of an interchange only. Widening is addressed in projects D18 and B36.

Why is D30 not regionally significant? It is connecting to US29.

As stated in the note, it does not appear this widening will significantly alter VMT, traffic patterns, etc, since the road already connects with US 29. But I would have no problem with calling it regionally significant.

#### NCDENR Follow-up Comments

In the past, wouldn't the first issue be addressed by leaving the functional classification and therefore regional significance fields as N/A. To me B32 just seems like an exempt project.

#### FHWA response

I consulted with the planners in my office related to your question on B32. Functional classification and regional significance is tied to the facility. In this case the "street scape and traffic management" project is happening on a roadway that is a principal arterial and the project is not regionally significant because the work that is being performed does not add canacity and therefore is exempt.

#### **FHWA**

#### Comments on Greensboro 2030 Long Range Transportation Plan Project List

I recommend a separate list showing the exempt projects

Is there a project list for 2004? Are there any projects in 2004 that will not be completed by Oct 2004?

Why are the following projects exempt? Project ID# B2, B5, B34

#### Projects in the TIP and not in the LRTP

I-2201, I-3606, I-4715, I-2402, R-952, R-4403, R-984, R-2808, U-2815, U-3314, there are a number of bridge projects, etc.

#### Projects in LRTP and not in TIP

Project ID# B1, B2, B3, B4, B5, B6, B8, B9, B10, B11, B12, B13, B14, B15, B20, B26, B27, B28, B29, B30, B31, B32, B33, B34, B38, B39, B41, B42, B43, B44, B45

#### Mileage differences between TIP and LRTP

- Project U-4015: TIP mileage is 1.6 and LRTP mileage is 1.2
- Project U2524: TIP mileage is 0 and LRTP mileage is 1.3
- Project R-2413: TIP mileage is 12.4 and LRTP mileage is 9.8
   Project U-2913: TIP mileage is 4.5 and LRTP mileage is 1.0
- Project R-4707: TIP mileage is 0 and LRTP mileage is 1.0

- · Project R-2577: TIP mileage is 18.8 and LRTP mileage is 4.6
- Project R-2910: TIP mileage is 5.4 and LRTP mileage is 1.0
- Project U-2581: TIP mileage is 5.2 and LRTP mileage is 4.5

Project R-2580: TIP mileage is 15.0 and LRTP mileage is 1.5

\*\*\*\*Make sure that all federally funded projects that meet the requirements of 40 CFR 93.126 and 93.127 are included in the exempt project list\*\*\*\*.

#### Greensboro MPO response to FHWA Comments

#### Projects in the TIP and not in the LRTP

Project	Remark
I-2201	Listed in revised LRTP spreadsheet
I-3606	* I-3606 could not be found, I-3603 is listed and is for the installation of lighting along I-40 and I-85
I-4715	* Resurfacing and milling of I-40 / I-85 from US 29 to I-85 Bypass (5.2 miles).
I-2402	Listed in revised LRTP spreadsheet
R-952	<ul> <li>Pavement and bridge rehabilitation of I-40 Business/US 421 from</li> </ul>
	US 158 to Sandy Ridge Road.
R-4403	* National Highway Guardrail system rehabilitation.
R-984	Listed in revised LRTP spreadsheet
R-2808	* Upgrade and safety improvements along US 29/70-I-85 Bus from I-85 in
	Davidson County to I-85 Guilford County (31.1 miles)
U-2815	Listed in revised LRTP spreadsheet
U-3314	* ITS improvements along I-40/85 corridor.

<sup>\*</sup> Projects of these magnitude are not included

Mileage differences between TIP and LRTP

Project	Remark
U-4015	Distance revised.
U-2524	Distance in spreadsheet and TIP are correct.
R-2413	Distance revised.
U-2913	Distance revised.
R-4707	This project includes 1.0 mile of US 29 upgrades to highway standards
R-2577	Distance listed in LRTP spreadsheet is only to the Forsyth County line.
	The remainder of the project is outside the Urban Area boundary
R-2910	Distance listed in LRTP spreadsheet is only to the Alamance County line.
	The remainder of the project is outside the Urban Area boundary.
U-2581	Distance revised.
R-2580	Distance listed in LRTP spreadsheet is only to the Rockingham County line.

# Projects in the LRTP and not in the TIP

Some are City or developer projects. Others have not yet been placed in TIP.

The remainder of the project is outside the Urban Area boundary.

#### FHWA Follow-up Comments

#### Mileage differences between TIP and LRTP

- Project U2524: TIP mileage is 15 and LRTP mileage is 16.6
- Project R-2413: TIP mileage is 12.4 and LRTP mileage is 9.8
- Project U-2913: TIP mileage is 4.5 and LRTP mileage is 3.4
   Project R-4707: TIP mileage is 1.0 and LRTP mileage is 0
- Project R-2577: TIP mileage is 18.8 and LRTP mileage is 4.6
   Project R-2910: TIP mileage is 5.4 and LRTP mileage is .3
- Project R-2580: TIP mileage is 15.0 and LRTP mileage is 1.5

#### Greensboro MPO Response

Project U2524: The mileage should break down as follows: 15 miles for the loop itself, 1.6 for construction of other facilities required as part of the Loop (Chimney Rock Rd, etc.). The TIP mileage does not include these portions, although we were told they are being done as part of that project.

- ? Project R-2413: Only the portion specified is in the MPO Boundary
  ? Project U-2913: Only the portion specified is in the MPO Boundary
- Project R-4707: Our understanding is that 1.0 miles of widening is
- associated with the interchange reconstruction.
- ? Project R-2577: Only the portion specified is in the MPO Boundary
  ? Project R-2910: Only the portion specified is in the MPO Boundary
- ? Project R-2910: Only the portion specified is in the MPO Boundary
  ? Project R-2500 Only the portion specified is in the MPO Boundary
- ? Project R-2580: Only the portion specified is in the MPO Boundary

# EPA & FTA Review of Greensboro 2030 LRTP Project Lists (TIP vs LRTP/Regional Significance/Exempt)

# Subject: EPA & FTA Review of Greensboro 2030 LRTP Project Lists (TIP vs LRTP/Regional Significance/Exempt)

**Date:** Tue, 20 Apr 2004 13:39:12 -0400

From: "Dancausse, Edward" < Edward. Dancausse@fhwa.dot.gov>

To: "Anson Gock (E-mail)" <agock@dot.state.nc.us>, "Behshad Norowzi (E-mail)" <bnorowzi@dot.state.nc.us>, "Dan Thomas (E-mail)" <danthomas@dot.state.nc.us>, "Don Bryson (E-mail)" <donbryson@mabtrans.com>, "Errett, Gregory (E-mail)" <GREGE@cityofws.org>, "Grosshandler, Lisa (E-mail)" lisa.grosshandler@ncmail.net>, "Grzymski, Andy (E-mail)" <andrew.grzymski@ci.high-</pre> point.nc.us>, "Hanna Cockburn (E-mail)" < hcockburn@ptcog.org>, "Heather Hildebrandt (E-mail)" <heather.hildebrandt@ncmail.net>, "Jeff Sovich (E-mail)" <jeffrey.sovich@greensboro-nc.gov>, "Kimberly Hinton (E-mail)" <khinton@dot.state.nc.us>, "Laura Boothe (E-mail)" <laura.boothe@ncmail.net>. "Marley, Bill" <Bill.Marley@fhwa.dot.gov>, "Matt Laurita (E-mail)" <Laurita.Matthew@epamail.epa.gov>, "Mcneil, Alex <FTA>" <Alex.Mcneil@fta.dot.gov>, "Meyer, Tyler (E-mail)" <tyler.meyer@ci.greensboro.nc.us>, "Monica Kerr (E-mail)" <mkerr@dot.state.nc.us>, "Patrick Reagan (E-mail)" <reaganpa@co.forsyth.nc.us>, "Peggy Holland (E-mail)" <peggy.holland@ci.greensboro.nc.us>, "Phil Conrad (E-mail)" <pconrad@mblsolution.com>, "Sheckler, Kelly (E-mail)" <Sheckler.Kelly@epamail.epa.gov>, "Stephen Stansbery (E-mail)" <stephen.stansbery@kimley-horn.com>, "Upchurch, James (E-mail)" <ihupchurch@dot.state.nc.us>, "Vitas, Jill (E-mail)" <Jill.Vitas@ncmail.net>, "Wendy Miller (E-mail)" <wendym@cityofws.org>, "Wilner, Marcus" <Marcus.Wilner@fhwa.dot.gov>

CC: "Barren, Loretta" < Loretta.Barren@fhwa.dot.gov>

EPA and FTA have reviewed the project lists and they had no comments, questions, or issues resulting from their review. We have interagency partner concurrence on the project list.

If you have any questions, please let me know.

**Thanks** 

Eddie

Edward J. Dancausse
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# APPENDIX E: Interagency Consultation Meeting Minutes

# Greensboro/Highpoint MPO LRTP Update and AQ Conformity Determination Interagency Consultation Meeting 12/4/2003

# **MEETING ATTENDEES**

Jerry Dudeck (NCDOT), Kimberly Hinton (NCDOT), Monica Kerr (NCDOT), Behshad Norowzi (NCDOT), Matt Laurita (EPA), Kelly Sheckler (EPA), Eddie Dancausse (FHWA), Marcus Wilner (FHWA), Bill Marley (FHWA), Alex McNeil (FTA-by phone), Heather Hildebrandt (NCDENR), Jill Vitas (NCDENR), Jeff Sovich (Greensboro MPO), Peggy Holland (Greensboro MPO), Andy Grzymski High Point MPO, Hanna Cockburn (PTRPO), Stephen Stansbery (Kimley-Horn), Don Bryson (MAB), Wendy Miller (WSDOT), Greg Errett (WSDOT), Patrick Reagan (FCEAD)

# INTRODUCTIONS/PURPOSE OF MEETING

Behshad Norowzi (BN) opened up meeting by summarizing the conformity challenges with Triad Conformity (Greensboro, High Point, and Winston Salem-Forsyth) because of the changes in the MPO boundaries resulting from the 2000 census.

The goal will be to get the entire Triad area (Greensboro, High Point, and Winston Salem-Forsyth on the same LRTP update and air quality (AQ) conformity determination schedule.

# TRIAD CONFORMITY APPROACH

Eddie Dancausse (ED) went over a proposal for doing conformity in the Triad area to deal with the conformity challenges resulting from the changes in the MPO boundaries due to the 2000 census. *See attached document: "Triad Conformity Approach" for more detailed information.* 

Kelly Sheckler (KS): Does Davie County have a SIP budget? Davie currently has a budget under the current maintenance SIP and will have a SIP budget under the maintenance SIP update.

KS: Conformity has to be done for Davie County even if there are no projects. Davie county conformity needs to be done as a part of the Winston Salem-Forsyth (WS-F) MPO AQ conformity determination. If the Triad does not have sub-area budgets, then conformity must be done for the whole area.

BN: Will look into the Davie County issue. Is Davie County part of the Forsyth County model? Do we have to do conformity for Davie County? When conformity is demonstrated for the Triad in 2005 it will include Davie County.

The Triad area has sub-area budgets by county: Guilford, Davidson, Forsyth, and Davie

Have we done conformity for Stokes County? No, the maintenance area does not include that area.

KS: Is the US Census Bureau changing functional classifications? Are the changes going to be covered in the upcoming conformity analysis?

- The model has urban and rural differentiation (existing and proposed future)
- VMT used for the SIP and conformity is classified by 12 road types (six urban and six rural)
- The census impacts population and employment.
- Don Bryson (DB): census does not impact functional classifications.
- The conformity analysis will consist of urban and local roads
- All road classes are represented in the existing model, which will be used for the Triad conformity analysis.
- The existing model has urban, rural and trip link frequencies
- The existing model does not have updated road classifications
- Change in functional classification will not change the total VMT for the area.

The Triad is currently under an early action compact (EAC) for the 8-hour ozone standard. As long as the Triad meets the EAC milestones they will only be required to do conformity for the 1-hour ozone standard.

We are not going to worry about MPO boundaries for the Greensboro/High Point LRTP conformity determination that is due in October 2004. The AQ conformity determination will be done based on county sub-area budgets for Guilford and Davidson Counties.

The entire Triad area (Greensboro MPO, High Point MPO, and the WS-F MPO) will do conformity by May 28, 2005. The AQ conformity determination will be done based on county sub-area budgets for Guilford, Davidson and Forsyth Counties. See attached document: "Triad Conformity Approach" for more detailed information.

Once conformity is done for the entire triad area in May 28, 2005, the Triad area will not be able to do conformity on separate timeframes because the WS-F MPO and the High Point MPO share Davidson County. The only way that the Greensboro/High Point MPO and the WS-F MPO could do conformity on separate timetables would be if NCDENR would splits up Davidson County into three sub-area budget and Forsyth County into two sub-area budget based on VMT to be supplied by NCDOT. NCDOT doesn't have the relevant VMT split for Davidson County at this time.

The interagency partners concurred on the Triad conformity approach.

#### GREENSBORO MPO PROGRESS REPORT

Jeff Sovich (JS) went over the Greensboro Milestone Schedule. See attached sheet: Greensboro MPO Project Schedule

#### HIGH POINT MPO PROGRESS REPORT

Andy Grzymski (AG): The High Point MPO will approve the project list during the January 2004 meeting and Final LRTP in July 2004.

#### DAVIDSON COUNTY RURAL CONFORMITY

BN: The rural conformity spreadsheet will be used to estimate VMT and speed for the rural portion of Davidson County. The rural spreadsheet is based on the TTI method modified by the NCDOT Statewide Planning Branch. The rural conformity spreadsheet was used for the last AQ conformity determination done for Davidson County on 10/8/2002.

#### TRIAD AREA MAINENANCE SIP UPDATE

Jill Vitas (JV) provided an update on the Triad Maintenance SIP update:

- The mobile source portion of the SIP is completed.
- The mobile SIP budgets will be different resulting from the change in the Mobile model (going from Mobile 5 to Mobile 6)
- A safety margin has been included in the new SIP budget numbers.
- The SIP budgets will broken down by county (i.e., Guilford, Davidson, Forsyth, and Davie)
- The most recent SIP update budget numbers including safety margin will be explained in detail in the draft document
- The scheduling of public meetings are done except for the Winston Salem area.
- The Triad SIP should be finalized in the February and March timeframe. The SIP budget numbers should not change much between now and then.
- The Triad SIP update has budget numbers for the following years: 2000, 2004, 2007, 2010, 2012, and 2015.

## KS offered the following comments:

- The only budget year that is required in the SIP update (for conformity purposes) is 2015). The intermediate years (2000, 2004, 2010, and 2012) are not required.
- If you include the intermediate year in the SIP (2000, 2004, 2010, and 2012) your emissions analysis/conformity determination will have to show that you meet the budget numbers for those years.
- Make sure that you do not end up having to meeting a budget number that is more restrictive than what is required.
- NCDENR may want to add a paragraph in the SIP that discusses what budget years will be used for conformity purposes
- EPA will have to provide an adequacy finding on the Triad's maintenance SIP update before the document goes out for public review.
- The Triad maintenance SIP once turned into EPA will have to go out for a 30 day public comment period. If there are no issues with the SIP the EPA can make an adequacy finding and publish it in the federal register 15 days later. The SIP budget numbers can be used 15 days after the adequacy finding is published in the federal register.

NCDENR would like to get an adequacy finding on the Triad maintenance SIP update from the EPA as quick as possible

### GREENSBORO/HIGH POINT MPO DRAFT AQ CONFORMITY SCHEDULE

BN went over significant milestone dates on the draft Greensboro/High Point MPO AQ draft conformity schedule.

The IC partners were asked to look over the Greensboro/High Point MPO Draft AQ conformity schedule and offer any comment or revisions to the schedule by December 18, 2003.

The IC partners will be kept informed of any changes to the schedule that might occur during the conformity process.

See the attached Greensboro/High Point MPO draft AQ conformity schedule.

# TRANSPORTATION CONFORMITY PREANALYSIS CONSENSUS PLAN (TCPCP)

ED went over the TCPCP and discussed the following:

- The information provided in the TCPCP will be based on the Triad maintenance SIP update budget numbers. If the new SIP update budget numbers are not ready in time to do conformity for the Greensboro and High Point MPO the TCPCP will be revised to reflect the existing SIP data and will be shared with all the IC partners.
- The IC partners were asked to review the TCPCP and offer any comment or revisions the by December 18, 2003.
- The IC partners will be kept informed of any changes to the TCPCP that might occur during the conformity process.
- The Greensboro/High Point MPO will provide information on the TCPCP addressing the following areas: CMAQ Projects Regionally Significant Projects (Federal or Non Federal), backup list of Exempt Projects and Non-Regionally Significant Projects (Federally Funded) by February 28, 2004.
- See the attached Greensboro/High Point MPO draft TCPCP.

#### COMMITMENTS

- The interagency partners concurred on the Triad conformity approach.
- NCDOT will research if conformity is required for Davie County. NCDOT will
  share its results with the interagency partners and will try to get consensus from
  the interagency partners on this issue
- The IC partners were asked to look over the Greensboro/High Point MPO Draft AQ conformity schedule and offer any comment or revisions to the schedule by December 18, 2003.
- The IC partners were asked to review the TCPCP and offer any comment or revisions the by December 18, 2003.
- The Greensboro/High Point MPO will provide information on the TCPCP addressing the following areas: CMAQ Projects, Regionally Significant Projects (Federal or Non Federal), Backup list of Exempt Projects and Non-Regionally Significant Projects (Federally Funded) by February 28, 2004.

### **QUESTIONS/COMMENTS**

Can we change the 2014 horizon year to the 2015 horizon year? No, 2014 was made a horizon years because the existing model generates VMT and speeds for that year.

Does it look like we will be able to meet the new SIP budget numbers? We should be able to meet the new budget numbers.

The WSF MPO will have to use the rural spreadsheet to predict VMT and speed for rural Davidson county.

The WSF MPO will use the existing model for their conformity determination in 2005. The horizon years of 2000, 2004, 2014, 2020, and 2030 will have to be used.

May 28, 2005: The Winston Salem MPO will complete a LRTP update. At this point the goal is to do a conformity determination for the entire Triad area. The AQ conformity determination on the LRTP will be made for the Winston Salem MPO, the Greensboro MPO, the High Point MPO and Davidson County. The conformity determination will cover Guilford County\*, Davidson County\*, and Forsyth County. \*The conformity determination that will be used for Guilford and Davidson Counties will be the one that is due to be completed by 10/1/04. This assumes that there are no changes to the Greensboro, High Point and Davidson County LRTP update and conformity determination and that all assumptions (including SIP) used in the LRTP updates and conformity determination adopted on 10/1/04 are still valid

The WS-F MPO AQ conformity process should start around May 2004

NCDENR may want to consider splitting up Davidson county into the following sub-area budgets: WSF MPO (portion of Davidson County), High Point MPO portion of Davidson County, and rural portion of Davidson County.

# **APPENDIX F: Emissions and VMT Calculations**

# **FINAL DRAFT**

VMT Adjustment Factors	Non-Local	Local			
-	1.0000	1.0000			
Year	2004	2014	2020	2030	2010
			_		
Urban Functional Classification		Model VM	Г		
Interstate	2,332,598	2,387,640	2,657,176	2,698,113	2,365,623
Freeway	1,806,844	2,747,264	3,297,892	4,981,973	2,371,096
Other P-A	1,689,395	1,796,075	2,030,462	2,179,482	1,753,403
Minor Arterial	3,416,336	3,712,466	4,227,739	4,688,058	3,594,014
Collector	865,436	920,277	1,075,719	1,219,752	898,341
Local	1,213,489	1,857,885	2,154,406	2,504,900	1,600,126
Total Urban	11,324,098	13,421,607	15,443,394	18,272,278	12,582,604
Rural Functional Classification	7 1,02 1,000				,,
Interstate	1,043,059	1,035,071	1,116,840	1,130,103	1,038,266
Other P-A	734,337	909,496	1,087,231	1,258,367	839,432
Minor Arterial	198,028	188,008	199,742	216,638	192,016
Major Collector	587,583	761,583	869,529	924,668	691,983
Minor Collector	585,681	623,726	742,178	814,924	608,508
Local	377,273	502,131	593,500	617,101	452,187
Total Rural	3,525,962	4,020,014	4,609,021	4,961,801	3,822,393
	2004	2014	2020	2030	2010
Grand Totals	14,850,060	17,441,622	20,052,415	23,234,079	16,404,997
		Normalized VI	ИT		
Urban Functional Classification		Normalized VI	ИТ		
Urban Functional Classification Interstate	2,332,598	2,387,640	<b>//T</b> 2,657,176	2,698,113	2,365,623
	2,332,598 1,806,844			2,698,113 4,981,973	
Interstate		2,387,640	2,657,176		2,371,096
Interstate Freeway Other P-A Minor Arterial	1,806,844	2,387,640 2,747,264	2,657,176 3,297,892	4,981,973	2,371,096 1,753,403
Interstate Freeway Other P-A	1,806,844 1,689,395	2,387,640 2,747,264 1,796,075	2,657,176 3,297,892 2,030,462	4,981,973 2,179,482	2,371,096 1,753,403 3,594,014
Interstate Freeway Other P-A Minor Arterial Collector Local	1,806,844 1,689,395 3,416,336	2,387,640 2,747,264 1,796,075 3,712,466	2,657,176 3,297,892 2,030,462 4,227,739	4,981,973 2,179,482 4,688,058	2,371,096 1,753,403 3,594,014 898,341
Interstate Freeway Other P-A Minor Arterial Collector	1,806,844 1,689,395 3,416,336 865,436	2,387,640 2,747,264 1,796,075 3,712,466 920,277	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719	4,981,973 2,179,482 4,688,058 1,219,752	2,371,096 1,753,403 3,594,014 898,341 1,600,126
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total	1,806,844 1,689,395 3,416,336 865,436 1,213,489	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900	2,371,096 1,753,403 3,594,014 898,341 1,600,126
Interstate Freeway Other P-A Minor Arterial Collector Local	1,806,844 1,689,395 3,416,336 865,436 1,213,489	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate	1,806,844 1,689,395 3,416,336 865,436 1,213,489	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098 1,043,059 734,337	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098 1,043,059 734,337 198,028	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367 216,638	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098 1,043,059 734,337 198,028 587,583	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008 761,583	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742 869,529	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367 216,638 924,668	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016 691,983
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098 1,043,059 734,337 198,028 587,583 585,681	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008 761,583 623,726	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742 869,529 742,178	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367 216,638 924,668 814,924	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016 691,983 608,508
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector Local	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098  1,043,059 734,337 198,028 587,583 585,681 377,273	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008 761,583 623,726 502,131	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742 869,529 742,178 593,500	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367 216,638 924,668	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016 691,983 608,508 452,187
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098 1,043,059 734,337 198,028 587,583 585,681	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008 761,583 623,726	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742 869,529 742,178	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367 216,638 924,668 814,924	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016 691,983 608,508 452,187
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector Local	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098  1,043,059 734,337 198,028 587,583 585,681 377,273	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008 761,583 623,726 502,131	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742 869,529 742,178 593,500	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367 216,638 924,668 814,924 617,101	2,365,623 2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016 691,983 608,508 452,187 3,822,392
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector Local	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098 1,043,059 734,337 198,028 587,583 585,681 377,273 3,525,961	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008 761,583 623,726 502,131 4,020,015	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742 869,529 742,178 593,500 4,609,020	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278  1,130,103 1,258,367 216,638 924,668 814,924 617,101 4,961,801	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016 691,983 608,508 452,187 3,822,392
Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector Local Rural Total	1,806,844 1,689,395 3,416,336 865,436 1,213,489 11,324,098 1,043,059 734,337 198,028 587,583 585,681 377,273 3,525,961	2,387,640 2,747,264 1,796,075 3,712,466 920,277 1,857,885 13,421,607 1,035,071 909,496 188,008 761,583 623,726 502,131 4,020,015	2,657,176 3,297,892 2,030,462 4,227,739 1,075,719 2,154,406 15,443,394 1,116,840 1,087,231 199,742 869,529 742,178 593,500 4,609,020	4,981,973 2,179,482 4,688,058 1,219,752 2,504,900 18,272,278 1,130,103 1,258,367 216,638 924,668 814,924 617,101 4,961,801	2,371,096 1,753,403 3,594,014 898,341 1,600,126 12,582,603 1,038,266 839,432 192,016 691,983 608,508 452,187 3,822,392

	Assumed Speed									
2004	2014	2020	2030							
52	52	52	53							
52	53	53	54							
29	29	29	28							
31	32	31	31							
33	33	32	32							
34	33	33	32							
55	55	55	56							
53	53	53	53							
42	41	41	41							
43	43	43	44							
44	45	44	45							
44	44	44	44							
	52 29 31 33 34 55 53 42 43 44	52 53 29 29 31 32 33 33 34 33 55 55 53 53 42 41 43 43 44 45	52       53       53         29       29       29         31       32       31         33       33       32         34       33       33         55       55       55         53       53       53         42       41       41         43       43       43         44       45       44							

Percent of V	ehicles Subjec	t to I&M in E	ach Analysis Year	
2004	2014	2020	2030	
0.81	0.96	0.96	0.96	

Total Normalized

VMT for this Analysis Year=

14,850,059

Page 3 Of 26 Date:8/9/2004 File: Guilford-08-09-04 Worksheet: NOx

29,379.00

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional Classification	Percent of Vehicles Subject to I&M	81.00%	19.00%			
Urban Functional Classification	Speed					
Interstate	52	2.715	2.77	2.73	2,332,598	6,367.99
Freeway	52	2.061	2.12	2.07	1,806,844	3,740.17
Other P-A	29	1.561	1.623	1.57	1,689,395	2,652.35
Minor Arterial	31	1.405	1.468	1.42	3,416,336	4,851.20
Collector	33	1.337	1.4	1.35	865,436	1,168.34
Local	34	1.471	1.532	1.48	1,213,489	1,795.96
			•	Total Urban	11,324,098	20,576.0
Rural Functional Classification	Speed					
Interstate	55	3.93	3.979	3.94	1,043,059	4,109.65
Other P-A	53	2.416	2.473	2.43	734,337	1,784.44
Minor Arterial	42	1.8	1.859	1.81	198,028	358.43
Major Collector	43	1.641	1.701	1.65	587,583	969.51
Minor Collector	44	1.643	1.703	1.65	585,681	966.37
Local	44	1.617	1.677	1.63	377,273	614.95
				Total Rural	3,525,961	8,803.36

Total NO<sub>X</sub>

Emissions (Kilograms per Day)

Page 4 Of 26 Date:8/9/2004 File: Guilford-08-09-04 Worksheet: NOx

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional Classification	Percent of Vehicles Subject to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	52	1.313	1.397	1.32	2,365,623	3,122.62
Freeway	53	1.038	1.130	1.04	2,371,096	2,465.94
Other P-A	29	0.810	0.906	0.81	1,753,403	1,420.26
Minor Arterial	32	0.737	0.834	0.74	3,594,014	2,659.57
Collector	33	0.706	0.804	0.71	898,341	637.82
Local	33	0.771	0.867	0.77	1,600,126	1,232.10
			•	Total Urban	12,582,603	11,538.31
Rural Functional			•			
Classification	Speed					
Interstate	55	1.858	1.931	1.86	1,038,266	1,931.17
Other P-A	53	1.183	1.271	1.19	839,432	998.92
Minor Arterial	41	0.915	1.006	0.92	192,016	176.65
Major Collector	43	0.849	0.942	0.85	691,983	588.19
Minor Collector	45	0.856	0.950	0.86	608,508	523.32
Local	44	0.840	0.934	0.84	452,187	379.84
				Total Rural	3,822,392	4,598.09
	Total				Total NO <sub>X</sub>	
	Normalized				Emissions	
	VMT for this	40 404 55-			(Kilograms per	40.400.40
	Analysis Year=	16,404,995			Day)	16,136.40

VMT for this

Analysis Year=

17,441,622

Page 5 Of 26 Date:8/9/2004 File: Guilford-08-09-04 Worksheet: NOx

10,392.00

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional Classification	Percent of Vehicles Subject to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	52	0.756	0.855	0.76	2,387,640	1,814.61
Freeway	53	0.624	0.731	0.63	2,747,264	1,730.78
Other P-A	29	0.509	0.620	0.51	1,796,075	916.00
Minor Arterial	32	0.473	0.585	0.48	3,712,466	1,781.98
Collector	33	0.457	0.570	0.46	920,277	423.33
Local	33	0.489	0.600	0.49	1,857,885	910.36
				Total Urban	13,421,607	7,577.06
Rural Functional Classification						
Interstate	55	1.022	1.107	1.03	1,035,071	1,066.12
Other P-A	53	0.695	0.797	0.70	909,496	636.65
Minor Arterial	41	0.560	0.665	0.56	188,008	105.28
Major Collector	43	0.528	0.636	0.53	761,583	403.64
Minor Collector	45	0.533	0.642	0.54	623,726	336.81
Local	44	0.526	0.634	0.53	502,131	266.13
				Total Rural	4,020,015	2,814.64

(Kilograms per

Day)

Page 6 Of 26 Date:8/9/2004 File: Guilford-08-09-04 Worksheet: NOx

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional Classification	Percent of Vehicles Subject to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	52	0.378	0.495	0.38	2,657,176	1,009.73
Freeway	53	0.324	0.451	0.33	3,297,892	1,088.30
Other P-A	29	0.274	0.404	0.28	2,030,462	568.53
Minor Arterial	31	0.260	0.392	0.27	4,227,739	1,141.49
Collector	32	0.253	0.386	0.26	1,075,719	279.69
Local	33	0.267	0.396	0.27	2,154,406	581.69
			•	Total Urban	15,443,394	4,669.43
Rural Functional			•			
Classification	Speed					
Interstate	55	0.489	0.590	0.49	1,116,840	547.25
Other P-A	53	0.354	0.476	0.36	1,087,231	391.40
Minor Arterial	41	0.296	0.419	0.30	199,742	59.92
Major Collector	43	0.283	0.411	0.29	869,529	252.16
Minor Collector	44	0.285	0.413	0.29	742,178	215.23
Local	44	0.284	0.412	0.29	593,500	172.12
				Total Rural	4,609,020	1,638.09
	Total				Total NO <sub>X</sub>	
	Normalized				Emissions	
	VMT for this				(Kilograms per	
	Analysis Year=	20,052,414			Day)	6,307.51

Page 7 Of 26 Date:8/9/2004 File: Guilford-08-09-04 Worksheet: NOx

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
	Percent of					
Functional	Vehicles					
Classification	Subject to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	53	0.226	0.343	0.23	2,698,113	620.5
Freeway	54	0.204	0.331	0.21	4,981,973	1,046.2
Other P-A	28	0.179	0.309	0.18	2,179,482	392.3
Minor Arterial	31	0.172	0.303	0.18	4,688,058	843.8
Collector	32	0.168	0.300	0.17	1,219,752	207.3
Local	32	0.176	0.305	0.18	2,504,900	450.8
			•	Total Urban	18,272,278	3,561.1
Rural Functional Classification			•			
Interstate	56	0.278	0.379	0.28	1,130,103	316.43
Other P-A	53	0.215	0.336	0.22	1,258,367	276.8
Minor Arterial	41	0.187	0.310	0.19	216,638	41.1
Major Collector	44	0.183	0.311	0.19	924,668	175.6
Minor Collector	45	0.185	0.313	0.19	814,924	154.84
Local	44	0.184	0.312	0.19	617,101	117.2
				Total Rural	4,961,801	1,082.20

Total
Normalized
VMT for this
Analysis Year= 23,234,079

Total NO<sub>X</sub> Emissions (Kilograms per Day)

4,643.38

VMT for this

Analysis Year=

14,850,059

Page 8 Of 26 Date:8/9/2004 File: Guilford-08-09-04 Worksheet: NOx

29,487.00

Old SIP		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional Classification	Percent of Vehicles Subject to I&M	81.00%	19.00%			
<u> </u>	Casjoot to lain	01.0070	10.0070			
Urban Functional Classification	Speed					
Interstate	52	2.721	2.776	2.73	2,332,598	6,367.99
Freeway	52	2.067	2.127	2.08	1,806,844	3,758.24
Other P-A	29	1.572	1.635	1.58	1,689,395	2,669.24
Minor Arterial	31	1.416	1.479	1.43	3,416,336	4,885.36
Collector	33	1.347	1.411	1.36	865,436	1,176.99
Local	34	1.480	1.542	1.49	1,213,489	1,808.10
				Total Urban	11,324,098	20,665.92
Rural Functional Classification	Speed					
Interstate	55	3.935	3.984	3.94	1,043,059	4,109.65
Other P-A	53	2.422	2.479	2.43	734,337	1,784.44
Minor Arterial	42	1.808	1.867	1.82	198,028	360.41
Major Collector	43	1.649	1.709	1.66	587,583	975.39
Minor Collector	44	1.651	1.711	1.66	585,681	972.23
Local	44	1.625	1.685	1.64	377,273	618.73
				Total Rural	3,525,961	8,820.85

(Kilograms per

Day)

ercent of /ehicles ubject to I&M	Emissions Factors with I&M  81.00%	Factors without I&M  19.00%	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
/ehicles ubject to I&M	81.00%	19.00%			
ubject to I&M	81.00%	19.00%			
I&M eed	81.00%	19.00%			
eed	81.00%	19.00%			
<b></b> 0					
52	1.030	1.134	1.05	2,332,598	2,449.23
52	1.069	1.181	1.09	1,806,844	1,969.46
29	1.236	1.372	1.26	1,689,395	2,128.64
31	1.225	1.361	1.25	3,416,336	4,270.42
33	1.206	1.340	1.23	865,436	1,064.49
34	1.190	1.320	1.21	1,213,489	1,468.32
			Total Urban	11,324,098	13,350.55
ed					
55	0.956	1.045	0.97	1,043,059	1,011.77
53	1.047	1.154	1.07	734,337	785.74
42	1.117	1.235	1.14	198,028	225.75
43	1.123	1.243	1.15	587,583	675.72
44	1.120	1.240	1.14	585,681	667.68
44	1.124	1.244	1.15	377,273	433.86
			Total Rural	3,525,961	3,800.52
	31 33 34 eed 55 53 42 43 44	31 1.225 33 1.206 34 1.190 eed 55 0.956 53 1.047 42 1.117 43 1.123 44 1.120	1.225 1.361 33 1.206 1.340 34 1.190 1.320	31 1.225 1.361 1.25 33 1.206 1.340 1.23 34 1.190 1.320 1.21 Total Urban  red  55 0.956 1.045 0.97 53 1.047 1.154 1.07 42 1.117 1.235 1.14 43 1.123 1.243 1.15 44 1.120 1.240 1.14 44 1.124 1.244 1.15	31 1.225 1.361 1.25 3,416,336 33 1.206 1.340 1.23 865,436 34 1.190 1.320 1.21 1,213,489  Total Urban 11,324,098   **Red**  55 0.956 1.045 0.97 1,043,059 53 1.047 1.154 1.07 734,337 42 1.117 1.235 1.14 198,028 43 1.123 1.243 1.15 587,583 44 1.120 1.240 1.14 585,681 44 1.124 1.244 1.15 377,273

			<b>Emissions</b>			
		Emissions	Factors without	Composite	Vehicle Miles	KG of Emissions per
		Factors with I&M	I&M	Emissions Rate	of Travel	Day
	Percent of					
	Vehicles					
Functional	Subject to					
Classification	I&M	96.00%	4.00%			
Urban Functiona	ıl					
Classification	Speed					
Interstate	52	0.618	0.682	0.62	2,365,623	1,466.69
Freeway	53	0.636	0.706	0.64	2,371,096	1,517.5
Other P-A	29	0.737	0.825	0.74	1,753,403	1,297.5
Minor Arterial	32	0.725	0.811	0.73	3,594,014	2,623.6
Collector	33	0.720	0.807	0.72	898,341	646.8
Local	33	0.719	0.803	0.72	1,600,126	1,152.0
				Total Urban	12,582,603	8,704.23
Rural Functional						
Classification	Speed					
Interstate	55	0.575	0.629	0.58	1,038,266	602.19
Other P-A	53	0.627	0.694	0.63	839,432	528.8
Minor Arterial	41	0.671	0.747	0.67	192,016	128.6
Major Collector	43	0.672	0.748	0.68	691,983	470.5
Minor Collector	45	0.668	0.743	0.67	608,508	407.70
Local	44	0.673	0.749	0.68	452,187	307.49
				Total Rural	3,822,392	2,445.42

Total Normalized VMT for this Analysis Year=

16,404,995

Total Emissions (Kilograms per Day)

11,149.66

		Emissions	Emissions Factors without	Commonito	Vehicle Miles	KO of Emissions non
		Factors with I&M	I&M	Composite Emissions Rate	of Travel	KG of Emissions per Day
	Percent of					·
	Vehicles					
Functional	Subject to					
Classification	I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	52	0.456	0.528	0.46	2,387,640	1,098.31
Freeway	53	0.467	0.545	0.47	2,747,264	1,291.21
Other P-A	29	0.532	0.630	0.54	1,796,075	969.88
Minor Arterial	32	0.525	0.622	0.53	3,712,466	1,967.61
Collector	33	0.521	0.618	0.52	920,277	478.54
Local	33	0.522	0.616	0.53	1,857,885	984.68
				Total Urban	13,421,607	6,790.24
Rural Functional						
Classification						
Interstate	55	0.428	0.489	0.43	1,035,071	445.08
Other P-A	53	0.461	0.536	0.46	909,496	418.37
Minor Arterial	41	0.491	0.575	0.49	188,008	92.12
Major Collector	43	0.490	0.575	0.49	761,583	373.18
Minor Collector	45	0.488	0.573	0.49	623,726	305.63
Local	44	0.492	0.578	0.50	502,131	251.07
				Total Rural	4,020,015	1,885.44
	Total				Total VOC	
	Normalized				Emissions	
	VMT for this				(Kilograms per	
	Analysis Year=	17,441,622			Day)	8,676.00

VMT for this Analysis Year=

20,052,414

6,779.38

			<b>Emissions</b>			
		Emissions	Factors without	Composite	Vehicle Miles	KG of Emissions per
		Factors with I&M	I&M	Emissions Rate	of Travel	Day
	Percent of					
	Vehicles					
Functional	Subject to	00.000/	4.000/			
Classification	I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	52	0.310	0.398	0.31	2,657,176	823.72
Freeway	53	0.315	0.409	0.32	3,297,892	1,055.33
Other P-A	29	0.359	0.475	0.36	2,030,462	730.9
Minor Arterial	31	0.356	0.473	0.36	4,227,739	1,521.99
Collector	32	0.352	0.468	0.36	1,075,719	387.26
Local	33	0.353	0.466	0.36	2,154,406	775.59
				Total Urban	15,443,394	5,294.85
Rural Functional						
Classification	Speed					
Interstate	55	0.297	0.371	0.30	1,116,840	335.05
Other P-A	53	0.313	0.404	0.32	1,087,231	347.9
Minor Arterial	41	0.332	0.434	0.34	199,742	67.9
Major Collector	43	0.330	0.433	0.33	869,529	286.94
Minor Collector	44	0.330	0.433	0.33	742,178	244.92
Local	44	0.332	0.435	0.34	593,500	201.79
				Total Rural	4,609,020	1,484.53

(Kilograms per Day)

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
	Percent of				0	,
	Vehicles					
Functional	Subject to					
Classification	I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	53	0.229	0.314	0.23	2,698,113	620.57
Freeway	54	0.229	0.321	0.23	4,981,973	1,145.85
Other P-A	28	0.272	0.385	0.28	2,179,482	610.25
Minor Arterial	31	0.265	0.378	0.27	4,688,058	1,265.78
Collector	32	0.260	0.373	0.26	1,219,752	317.14
Local	32	0.267	0.376	0.27	2,504,900	676.32
				Total Urban	18,272,278	4,635.91
Rural Functioanl						
Classification	Speed					
Interstate	56	0.224	0.296	0.23	1,130,103	259.92
Other P-A	53	0.231	0.319	0.23	1,258,367	289.42
Minor Arterial	41	0.247	0.345	0.25	216,638	54.16
Major Collector	44	0.241	0.341	0.25	924,668	231.17
Minor Collector	45	0.243	0.341	0.25	814,924	203.73
Local	44	0.246	0.345	0.25	617,101	154.28
				Total Rural	4,961,801	1,192.68

Year of Analysis = 2004

			Emissions			
		<b>Emissions</b>	Factors without	Composite	Vehicle Miles	KG of Emissions per
Old SIP		Factors with I&M	I&M	Emissions Rate	of Travel	Day
	Percent of					
	Vehicles					
Functional	Subject to					
Classification	I&M	81.00%	19.00%			
Urban Functional						
Classification	Speed					
Interstate	52	1.071	1.175	1.09	2,332,598	2,542.53
Freeway	52	1.11	1.224	1.13	1,806,844	2,041.73
Other P-A	29	1.289	1.427	1.32	1,689,395	2,230.00
Minor Arterial	31	1.277	1.415	1.30	3,416,336	4,441.2
Collector	33	1.257	1.393	1.28	865,436	1,107.76
Local	34	1.24	1.372	1.27	1,213,489	1,541.13
				Total Urban	11,324,098	13,904.39
Rural Functional						
Classification	Speed					
Interstate	55	0.994	1.083	1.01	1,043,059	1,053.49
Other P-A	53	1.087	1.196	1.11	734,337	815.1°
Minor Arterial	42	1.162	1.282	1.18	198,028	233.67
Major Collector	43	1.168	1.290	1.19	587,583	699.22
Minor Collector	44	1.165	1.286	1.19	585,681	696.96
Local	44	1.169	1.291	1.19	377,273	448.9
				Total Rural	3,525,961	3,947.42

Analysis Year= 14,850,059 ograms Day) 17,852.00

Analysis Year=

14,850,059

Day)

0.00

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional	Percent of Vehicles					
Classification	Subject to I&M	81.00%	19.00%			
Urban Functional						
Classification	Speed					
Interstate	52	0.000	0.000	0.00	2,332,598	0.00
Freeway	52	0.000	0.000	0.00	1,806,844	0.00
Other P-A	29	0.000	0.000	0.00	1,689,395	0.00
Minor Arterial	31	0.000	0.000	0.00	3,416,336	0.00
Collector	33	0.000	0.000	0.00	865,436	0.00
Local	34	0.000	0.000	0.00	1,213,489	0.00
				Total Urban	11,324,098	0.00
Rural Functional						
Classification	Speed					
Interstate	55	0.000	0.000	0.00	1,043,059	0.00
Other P-A	53	0.000	0.000	0.00	734,337	0.00
Minor Arterial	42	0.000	0.000	0.00	198,028	0.00
Major Collector	43	0.000	0.000	0.00	587,583	0.00
Minor Collector	44	0.000	0.000	0.00	585,681	0.00
Local	44	0.000	0.000	0.00	377,273	0.00
				Total Rural	3,525,961	0.00

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional	Percent of Vehicles					
Classification	Subject to I&M	0.00%	100.00%			
Urban Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	2,365,623	0.00
Freeway	0	0.000	0.000	0.00	2,371,096	0.00
Other P-A	0	0.000	0.000	0.00	1,753,403	0.00
Minor Arterial	0	0.000	0.000	0.00	3,594,014	0.00
Collector	0	0.000	0.000	0.00	898,341	0.00
Local	0	0.000	0.000	0.00	1,600,126	0.00
				Total Urban	12,582,603	0.00
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	1,038,266	0.00
Other P-A	0	0.000	0.000	0.00	839,432	0.00
Minor Arterial	0	0.000	0.000	0.00	192,016	0.00
Major Collector	0	0.000	0.000	0.00	691,983	0.00
Minor Collector	0	0.000	0.000	0.00	608,508	0.00
Local	0	0.000	0.000	0.00	452,187	0.00
				Total Rural	3,822,392	0.00
	<b>+</b>				T . 100	
	Total Normalized				Total CO Emissions	
	VMT for this				(Kilograms per	
	Analysis Year=	16,404,995			Day)	0.00
		10,404,993		;	Day)	0.00

VMT for this

Analysis Year=

17,441,622

(Kilograms per

Day)

0.00

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional	Percent of Vehicles					
Classification	Subject to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	52	0.000	0.000	0.00	2,387,640	-
Freeway	53	0.000	0.000	0.00	2,747,264	0.00
Other P-A	29	0.000	0.000	0.00	1,796,075	0.00
Minor Arterial	32	0.000	0.000	0.00	3,712,466	0.00
Collector	33	0.000	0.000	0.00	920,277	0.00
Local	33	0.000	0.000	0.00	1,857,885	0.00
				Total Urban	13,421,607	0.00
Rural Functional Classification						
Interstate	55	0.000	0.000	0.00	1,035,071	0.00
Other P-A	53	0.000	0.000	0.00	909,496	0.00
Minor Arterial	41	0.000	0.000	0.00	188,008	0.00
Major Collector	43	0.000	0.000	0.00	761,583	0.00
Minor Collector	45	0.000	0.000	0.00	623,726	0.00
Local	44	0.000	0.000	0.00	502,131	0.00
			,	Total Rural	4,020,015	0.00

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional Classification	Percent of Vehicles Subject to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	52	0.000	0.000	0.00	2,657,176	0.00
Freeway	53	0.000	0.000	0.00	3,297,892	0.00
Other P-A	29	0.000	0.000	0.00	2,030,462	0.00
Minor Arterial	31	0.000	0.000	0.00	4,227,739	0.00
Collector	32	0.000	0.000	0.00	1,075,719	0.00
Local	33	0.000	0.000	0.00	2,154,406	0.00
				Total Urban	15,443,394	0.00
Rural Functional						
Classification	Speed					
Interstate	55	0.000	0.000	0.00	1,116,840	0.00
Other P-A	53	0.000	0.000	0.00	1,087,231	0.00
Minor Arterial	41	0.000	0.000	0.00	199,742	0.00
Major Collector	43	0.000	0.000	0.00	869,529	0.00
Minor Collector	44	0.000	0.000	0.00	742,178	0.00
Local	44	0.000	0.000	0.00	593,500	0.00
				Total Rural	4,609,020	0.00

Normalized

VMT for this

Analysis Year=

23,234,079

Emissions

(Kilograms per

Day)

0.00

		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
Functional Classification	Percent of Vehicles Subject to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	53	0.000	0.000	0.00	2,698,113	0.00
Freeway	54	0.000	0.000	0.00	4,981,973	0.00
Other P-A	28	0.000	0.000	0.00	2,179,482	0.00
Minor Arterial	31	0.000	0.000	0.00	4,688,058	0.00
Collector	32	0.000	0.000	0.00	1,219,752	0.00
Local	32	0.000	0.000	0.00	2,504,900	0.00
				Total Urban	18,272,278	0.00
Rural Functional						
Classification	Speed					
Interstate	56	0.000	0.000	0.00	1,130,103	0.00
Other P-A	53	0.000	0.000	0.00	1,258,367	0.00
Minor Arterial	41	0.000	0.000	0.00	216,638	0.00
Major Collector	44	0.000	0.000	0.00	924,668	0.00
Minor Collector	45	0.000	0.000	0.00	814,924	0.00
Local	44	0.000	0.000	0.00	617,101	0.00
				Total Rural	4,961,801	0.00

Page 20 Of &[Pages] Date: 8/9/2004 File: Guilford-08-09-04 Worksheet: VMT\_ADJ

1994 Modeled Area Popul 1994 County Population	ation 1	Population Adjustment F	-actor
Functional Classific	cation 1994 Universe	1994 Model	
Urban Functional	Autor 1004 Offiveroc	1004 MOGOI	
Classification			
Interstate	788,010	788,010	
Freeway	1,539,440	1,539,440	
Other P-A	233,020	233,020	
Minor Arterial	947,650	947,650	
Collector	889,400	889,400	
Local	630,930	630,930	
Rural Functional Classific	ation		
Interstate	281,280	281,280	
Other P-A	313,620	313,620	
Minor Arterial	119,660	119,660	
Major Collector	354,700	354,700	
Minor Collector	97,260	97,260	
Local	102,910	102,910	
	6,297,880	6,297,880	
Totals			
	SIP VMT	Population Adjusted SIP VMT	Model VMT
Non-Local	5,564,040		5,564,040
Local	733,840	, ,	733,840
VMT Adjustment Factors			
Non-Local	1.0000		
Local	1.0000		

			VOC Comparison Table			
Analysis Year	Model	Off-Model	Comparison Amount	Budget Amount(Kg/Day)	Tons/day	
2004 old SIP	17,852	141	17,711	22,290	24.57	OK
2004	17,151	141	17,010	18,334	20.21	OK
2007	14,150	123	14,027	15,921	17.55	OK
2010	11,150	106	11,044	12,991	14.32	OK
2012 1	9,913	94	9,819	11,884	13.10	OK
2014	8,676	82	8,594	11,884	13.10	OK
2015	8,360	87	8,273	10,578	11.66	OK
2020	6,779	111	6,668	10,578	11.66	OK
2030	5,829	129	5,700	10,578	11.66	OK

			NOx Comparison Table			
Analysis Year	Model	Off-Model	Comparison Amount	Budget Amount(Kg/Day)	Tons/day	
2004 old SIP	29,487	177	29,310	37,430	41.26	OK
2004	29,379	177	29,202	30,871	34.03	OK
2007 1	22,758	152	22,605	24,748	27.28	OK
2010	16,136	128	16,008	18,243	20.11	OK
2012	13,264	112	13,152	14,914	16.44	OK
2014	10,392	95	10,297	14,914	16.44	OK
2015 1	9,711	99	9,612	11,050	12.18	OK
2020	6,308	116	6,192	11,050	12.18	OK
2030	4,643	59	4,584	11,050	12.18	OK

 $<sup>^{\</sup>rm 1}$  The conformity estimates for 2007, 2012 and 2015 were developed by interpolating.

### Off Model

		NOX			
	Total	Incident	Van Pool	Transit	Park & Ride
	(Kg/Day)	Management	Program	Improvements	Lots
Year					
2004	177	86	1	88	2
2014	95	64	1	29	1
2020	116	76	2	37	1
2030	59	23	2	34	0
		V00			
	<b>-</b>	VOC	5	<b>-</b> :	D 1 0 D: 1
.,	Total	Incident	Van Pool	Transit	Park & Ride
Year	(Kg/Day)	Management	Program	Improvements	Lots
2004	141	33	1	105	2
2014	82	34	2	45	1
2020	111	21	4	85	1
2030	129	24	6	98	1
CO					
	Total	Incident	Van Pool	Transit	Park & Ride
Year	(Kg/Day)	Management	Program	Improvements	Lots
2004	0	0	0	0	0
2014	0	0	0	0	0
2020	0	0	0	0	0
2030	0	0	0	0	0
2010	0	0	0	0	0

### ITS

#### Regional Freeway Emissions

			Regional i	reeway Emis	310113			
Year		Pollutant						
	NOX	VOC	CO					
2004	14,218	5,430	0					
2014	8,177	4,357	0					
2020	7,862	2,214	0					
2030	1,983	2,026	0					
Emissions Caus	ed by Nonrect	urring Congestion (	(4.9% of total).					
		Pollutant						
Year	NOX	VOC	CO					
2004	697	266	0					
2014	401	213	0					
2020	385	108	0					
2030	97	99	0					
Dua Ti								
Program Type			Effectiveness					
Incident								
Detection &					Program in			
Response			50%	1	Use=	1	1994	
Motorist								
Assistance Patrol			25%	2		1	2004	
Surveillance			15%	3		1	2014	
Guivelliance			1370	J		1	2020	
						1	2030	
			Emis	ssions Reduc	tion	·	2000	
	Total	Freeway VMT						
	Freeway	Subject to	NOX	VOC				
Year	VMT	Program	(KG/Day)	(KG/Day)	CO (KG/Day)			
2004	5,182,501	1,276,992	86	33	-			
2014	6,169,975	1,986,035	64	34	-			
2020	7,071,908	2,787,518	76	21	-			
2030	8,810,189	4,191,913	23	24	-			

# Vanpool

## Vanpool Information by Year

				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
						Daily Miles Per	
		Avg		Commute	Cars	Vehicle (AVG	Total Daily
Year	#Vanpools	Riders/Van	Total Riders	VOR	Removed	Commute X 2)	Miles Reduced
2004	5.5	12	66	1.35	48	19.94	957
2014	25.5	12	306	1.35	226	20.1	4,543
2020	37.5	12	450	1.35	333	20.24	6,740
2030	57.5	12	690	1.35	511	20.52	10,486

### **Emissions Factors By Pollutant for LDGV (Urban Prin Art)**

	NOX	VOC	CO
2004	0.84	1.00	0
2014	0.24	0.364	0
2020	0.27	0.63	0
2030	0.21	0.60	0

# Emissions Reduction By Pollutant Total Dailv

	l otal Daily			
	Miles		VOC	
	Reduced	NOX (Kg/Day)	(Kg/Day)	CO (Kg/Day)
2004	957	1	1	0
2014	4,543	1	2	0
2020	6,740	2	4	0
2030	10,486	2	6	0

Page 25Of 26 Date 8/9/2004 File Guilford-08-09-04 WorksheetTransitImprovements

# Transit Improvements

#### Transit Riders

						Daily VMT
				Vehicles	Avg. Trip	Reduction
Year	After	Before	Avg. VOR	Removed	Length (Mi.)	(Mi.)
2004	14,600	-	1.35	10,814	9.67	104,571
2014	16,300	-	1.31	12,442	9.87	122,803
2020	17,700	-	1.31	13,511	9.98	134,840
2030	21,300	-	1.31	16,259	10.07	163,728

## Emissions Factors (gm/mi)

	NOX	VOC	CO
2004	0.84	1.00	0.00
2014	0.24	0.364	0.00
2020	0.27	0.63	0.00
2030	0.21	0.60	0.00

### Emissions Reduction (Kg/Day)

	NOX	VOC	CO	
2004		88	105	0
2014		29	45	0
2020		37	85	0
2030		34	98	0
2010		0	0	0

# Park\_Ride

2004 2014 2020 2030 2010	Utiliization 90% 90% 90% 90%	#of Spaces 220 220 220 220	# of Cars 198 198 198 198	AVG Trip Length 5.58 5.77 5.94 5.93	Daily Miles Per Vehicle (AVG Commute X 2) 11.16 11.54 11.88 11.86	Total Daily Miles Reduced 2209.68 2284.92 2352.24 2348.28
		nissions Facot				
	NOX	VOC	CO			
2004	0.84	1.00	0			
2014	0.24	0.364	0			
2020	0.27	0.63	0			
2030	0.21	0.60	0			
2010						
2004 2014 2020 2030	Emissions NOX 2 1 1	Reduction VOC 2 1 1	CO 0 0 0			

Page 1 Of 16 Date: 8/12/2004 File: Davidson-08-10-04 Worksheet: VMT\_Input

VMT Adjustment Factors	Non-Local	Local			
	1.0000	1.0000			
Year	2004	2014	2020	2030	2010
	Mo	odel VMT			
Urban Functional Classification					
Interstate	341,058	429,986	452,646	476,536	394,415
Freeway	189,419	241,734	290,904	514,714	220,808
Other P-A	201,096	256,518	226,357	234,507	234,349
Minor Arterial	241,278	293,300	359,302	441,268	272,491
Collector	45,573	79,370	78,497	64,830	65,851
Local	68,093	46,956	55,257	46,577	55,411
Total Urban	1,086,518	1,347,862	1,462,964	1,778,433	1,243,325
Rural Functional Classification					
Interstate	0	_	0	0	0
Other P-A	0	_	0	0	0
Minor Arterial	43,781	56,569	68,646	54,861	51,453
Major Collector	56,025	85,039	85,735	87,102	73,433
Minor Collector	51,971	62,550	72,965	86,061	58,318
Local	55,187	87,311	115,598	119,655	74,461
Total Rural	206,963	291,468	342,944	347,678	257,666
	200,000	201,400	042,044	047,070	201,000
	2004	2014	2020	2030	2010
Grand Totals	2004 1,293,481	2014 1,639,330	2020 1,805,907	2030	2010 1,500,991
Grand Totals		1,639,330	1,805,907	2030 2,126,111	
			1,805,907		
Urban Functional Classification	1,293,481	1,639,330 Normalized VM	1,805,907	2,126,111	1,500,991
Urban Functional Classification	1,293,481 341,058	1,639,330 Normalized VM 429,986	1,805,907 IT 452,646	<b>2,126,111</b> 476,536	<b>1,500,991</b> 394,415
Urban Functional Classification Interstate Freeway	1,293,481 341,058 189,419	1,639,330 Normalized VM 429,986 241,734	1,805,907 IT 452,646 290,904	<b>2,126,111</b> 476,536  514,714	394,415 220,808
Urban Functional Classification Interstate Freeway Other P-A	341,058 189,419 201,096	1,639,330 Normalized VM 429,986 241,734 256,518	1,805,907 IT 452,646 290,904 226,357	2,126,111 476,536 514,714 234,507	394,415 220,808 234,349
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial	341,058 189,419 201,096 241,278	1,639,330 Normalized VM 429,986 241,734 256,518 293,300	1,805,907 IT  452,646 290,904 226,357 359,302	2,126,111 476,536 514,714 234,507 441,268	394,415 220,808 234,349 272,491
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector	341,058 189,419 201,096 241,278 45,573	1,639,330 Normalized VM 429,986 241,734 256,518 293,300 79,370	1,805,907 IT 452,646 290,904 226,357 359,302 78,497	2,126,111 476,536 514,714 234,507 441,268 64,830	394,415 220,808 234,349 272,491 65,851
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local	341,058 189,419 201,096 241,278 45,573 68,093	1,639,330 Normalized VM 429,986 241,734 256,518 293,300 79,370 46,956	1,805,907 IT 452,646 290,904 226,357 359,302 78,497 55,257	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577	394,415 220,808 234,349 272,491 65,851 55,411
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector	341,058 189,419 201,096 241,278 45,573	1,639,330 Normalized VM 429,986 241,734 256,518 293,300 79,370	1,805,907 IT 452,646 290,904 226,357 359,302 78,497	2,126,111 476,536 514,714 234,507 441,268 64,830	394,415 220,808 234,349 272,491 65,851
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local	341,058 189,419 201,096 241,278 45,573 68,093	1,639,330 Normalized VM 429,986 241,734 256,518 293,300 79,370 46,956	1,805,907 IT 452,646 290,904 226,357 359,302 78,497 55,257	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577	394,415 220,808 234,349 272,491 65,851 55,411
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total	341,058 189,419 201,096 241,278 45,573 68,093	1,639,330 Normalized VM 429,986 241,734 256,518 293,300 79,370 46,956	1,805,907 IT 452,646 290,904 226,357 359,302 78,497 55,257	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577	394,415 220,808 234,349 272,491 65,851 55,411
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification	341,058 189,419 201,096 241,278 45,573 68,093 1,086,517	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864	1,805,907  IT  452,646 290,904 226,357 359,302 78,497 55,257 1,462,963	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432	394,415 220,808 234,349 272,491 65,851 55,411 1,243,325
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate	1,293,481 341,058 189,419 201,096 241,278 45,573 68,093 1,086,517	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864	1,805,907  IT  452,646 290,904 226,357 359,302 78,497 55,257 1,462,963	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432	394,415 220,808 234,349 272,491 65,851 55,411 1,243,325
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A	341,058 189,419 201,096 241,278 45,573 68,093 1,086,517	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864  0 0	1,805,907  AT  452,646 290,904 226,357 359,302 78,497 55,257 1,462,963	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432	394,415 220,808 234,349 272,491 65,851 55,411 1,243,325
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial	1,293,481  341,058 189,419 201,096 241,278 45,573 68,093 1,086,517  0 0 43,781	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864  0 0 56,569	1,805,907  A52,646 290,904 226,357 359,302 78,497 55,257 1,462,963  0 0 68,646	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432 0 0 54,861	394,415 220,808 234,349 272,491 65,851 55,411 1,243,325
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector	1,293,481  341,058 189,419 201,096 241,278 45,573 68,093 1,086,517  0 0 43,781 56,025	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864  0 0 56,569 85,039	1,805,907  AT  452,646 290,904 226,357 359,302 78,497 55,257 1,462,963  0 0 68,646 85,735	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432 0 0 54,861 87,102	394,415 220,808 234,349 272,491 65,851 55,411 1,243,325 0 0 0 51,453 73,433
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector	1,293,481  341,058 189,419 201,096 241,278 45,573 68,093 1,086,517  0 0 43,781 56,025 51,971	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864  0 0 0 56,569 85,039 62,550	1,805,907  AT  452,646 290,904 226,357 359,302 78,497 55,257 1,462,963  0 0 0 68,646 85,735 72,965	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432 0 0 0 54,861 87,102 86,061	1,500,991  394,415 220,808 234,349 272,491 65,851 55,411 1,243,325  0 0 51,453 73,433 58,318
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector Local	1,293,481  341,058 189,419 201,096 241,278 45,573 68,093 1,086,517  0 0 43,781 56,025 51,971 55,187 206,964	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864  0 0 56,569 85,039 62,550 87,311 291,469	1,805,907  A52,646 290,904 226,357 359,302 78,497 55,257 1,462,963  0 0 68,646 85,735 72,965 115,598 342,944	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432 0 0 54,861 87,102 86,061 119,655 347,679	1,500,991  394,415 220,808 234,349 272,491 65,851 55,411 1,243,325  0 0 51,453 73,433 58,318 74,461 257,665
Urban Functional Classification Interstate Freeway Other P-A Minor Arterial Collector Local Urban Total  Rural Functional Classification Interstate Other P-A Minor Arterial Major Collector Minor Collector Local	1,293,481  341,058 189,419 201,096 241,278 45,573 68,093 1,086,517  0 0 43,781 56,025 51,971 55,187	1,639,330  Normalized VM  429,986 241,734 256,518 293,300 79,370 46,956 1,347,864  0 0 56,569 85,039 62,550 87,311	1,805,907  AT  452,646 290,904 226,357 359,302 78,497 55,257 1,462,963  0 0 68,646 85,735 72,965 115,598	2,126,111 476,536 514,714 234,507 441,268 64,830 46,577 1,778,432 0 0 54,861 87,102 86,061 119,655	394,415 220,808 234,349 272,491 65,851 55,411 1,243,325 0 0 51,453 73,433 58,318 74,461

Page 2 Of 16 Date: 8/12/2004 File: Davidson-08-10-04 Worksheet: Assumed Speed

	Assur	ned Spe	ed	
Year	2004	2014	2020	2030
Urban Functional				
Classification				
Interstate	60	60	60	60
Freeway	55	55	55	55
Other P-A	30	30	29	28
Minor Arterial	32	32	32	34
Collector	33	32	33	33
Local	35	32	33	31
Rural Functional				
Classification				
Interstate	0	0	0	0
Other P-A	0	0	0	0
Minor Arterial	40	37	38	38
Major Collector	43	43	42	43
Minor Collector	43	43	42	42
Local	44	45	45	45

Percent of Vehicles Sub	ject to I&M in	Each Analy	sis Year	
2004	2014	2020	2030	
0.89	0.96	0.96	0.96	

Year of Analysis =	2004					
		Emissions	Emissions	Composite		KG of
		Factors with	Factors	Emissions	<b>Vehicle Miles</b>	<b>Emissions per</b>
		I&M	without I&M	Rate	of Travel	Day
	Percent of					
	Vehicles					
Functional	Subject to					
Classification	I&M	89.00%	11.00%			
Urban Functional						
Classification	Speed					
Interstate	60	3.137	3.183	3.14	341,058	1,070.92
Freeway	55	2.148	2.197	2.15	189,419	407.25
Other P-A	30	1.56	1.613	1.57	201,096	315.72
Minor Arterial	32	1.41	1.463	1.42	241,278	342.61
Collector	33	1.347	1.4	1.35	45,573	61.52
Local	35	1.476	1.528	1.48	68,093	100.78
			-	Total Urban	1,086,518	2,298.81
Rural Functional						
Classification	Speed					
Interstate	0	0	0.000	0.00	0	0.00
Other P-A	0	0	0.000	0.00	0	0.00
Minor Arterial	40	1.781	1.831	1.79	43,781	78.37
Major Collector	43	1.65	1.701	1.66	56,025	93.00
Minor Collector	43	1.642	1.693	1.65	51,971	85.75
Local	44	1.626	1.677	1.63	55,187	89.95
				Total Rural	206,963	347.08

Total
Normalized
VMT for this
Analysis Year= 1,293,482

Total NO<sub>X</sub>
Emissions
(Kilograms per
Day) 2,646.00

Year of Analysis =	2010					
		Emissions	Emissions	Composite		KG of
		Factors with	<b>Factors</b>	<b>Emissions</b>	<b>Vehicle Miles</b>	<b>Emissions per</b>
		I&M	without I&M	Rate	of Travel	Day
	Percent of					
	Vehicles					
Functional	Subject to					
Classification	I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	1.518	1.603	1.52	394,415	599.51
Freeway	55	1.063	1.155	1.07	220,808	236.26
Other P-A	30	0.805	0.901	0.81	234,349	189.82
Minor Arterial	32	0.737	0.834	0.74	272,491	201.64
Collector	32	0.708	0.807	0.71	65,851	46.75
Local	32	0.773	0.869	0.78	55,411	43.22
			-	Total Urban	1,243,325	1,317.22
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	37	0.898	0.989	0.90	51,453	46.31
Major Collector	43	0.849	0.942	0.85	73,433	62.42
Minor Collector	43	0.846	0.939	0.85	58,318	49.57
Local	45	0.845	0.939	0.85	74,461	63.29
			•	Total Rural	257,665	221.59

Total	
Normalized	
VMT for this	
Analysis Year=	1,500,990

Total NO <sub>X</sub>	
Emissions	
(Kilograms per	
Day)	1,538.80

Year of Analysis =	2014					
		Emissions	Emissions	Composite		KG of
		Factors with	<b>Factors</b>	<b>Emissions</b>	<b>Vehicle Miles</b>	<b>Emissions per</b>
		I&M	without I&M	Rate	of Travel	Day
	Percent of					
	Vehicles					
Functional	Subject to					
Classification	I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	0.863	0.963	0.87	429,986	374.09
Freeway	55	0.638	0.745	0.64	241,734	154.71
Other P-A	30	0.506	0.616	0.51	256,518	130.82
Minor Arterial	32	0.473	0.585	0.48	293,300	140.78
Collector	32	0.459	0.572	0.46	79,370	36.51
Local	32	0.491	0.601	0.50	46,956	23.48
			•	Total Urban	1,347,864	860.39
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	37	0.550	0.655	0.55	56,569	31.11
Major Collector	43	0.528	0.636	0.53	85,039	45.07
Minor Collector	43	0.527	0.636	0.53	62,550	33.15
Local	45	0.528	0.637	0.53	87,311	46.27
·	·	·		Total Rural	291,469	155.61

Total
Normalized
VMT for this
Analysis Year= 1,639,333

Total NO<sub>X</sub>
Emissions
(Kilograms per
Day) 1,016.00

Year of Analysis =	2020					
		Emissions	Emissions	Composite		KG of
		Factors with	<b>Factors</b>	<b>Emissions</b>	<b>Vehicle Miles</b>	<b>Emissions per</b>
		I&M	without I&M	Rate	of Travel	Day
	Percent of					-
	Vehicles					
Functional	Subject to					
Classification	I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	0.427	0.546	0.43	452,646	194.64
Freeway	55	0.331	0.458	0.34	290,904	98.91
Other P-A	29	0.274	0.404	0.28	226,357	63.38
Minor Arterial	32	0.259	0.391	0.26	359,302	93.42
Collector	33	0.252	0.385	0.26	78,497	20.41
Local	33	0.267	0.396	0.27	55,257	14.92
				Total Urban	1,462,963	485.67
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	38	0.292	0.415	0.30	68,646	20.59
Major Collector	42	0.282	0.409	0.29	85,735	24.86
Minor Collector	42	0.282	0.409	0.29	72,965	21.16
Local	45	0.285	0.413	0.29	115,598	33.52
				Total Rural	342,944	100.14

Total	
Normalized	
VMT for this	
Analysis Year=	1,805,907

Total NO <sub>X</sub>	
Emissions	
(Kilograms per	
Day)	585.81

Year of Analysis =	2030					
		Emissions	Emissions	Composite		KG of
		Factors with	<b>Factors</b>	<b>Emissions</b>	<b>Vehicle Miles</b>	<b>Emissions per</b>
		I&M	without I&M	Rate	of Travel	Day
	Percent of					
	Vehicles					
Functional	Subject to					
Classification	I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	0.251	0.369	0.26	476,536	123.90
Freeway	55	0.206	0.333	0.21	514,714	108.09
Other P-A	28	0.179	0.309	0.18	234,507	42.21
Minor Arterial	34	0.17	0.300	0.18	441,268	79.43
Collector	33	0.167	0.299	0.17	64,830	11.02
Local	31	0.177	0.306	0.18	46,577	8.38
			•	Total Urban	1,778,432	373.03
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	38	0.185	0.307	0.19	54,861	10.42
Major Collector	43	0.182	0.309	0.19	87,102	16.55
Minor Collector	42	0.182	0.309	0.19	86,061	16.35
Local	45	0.185	0.313	0.19	119,655	22.73
				Total Rural	347,679	66.06

Total	
Normalized	
VMT for this	
Analysis Year=	2,126,111

Total NO <sub>X</sub>	
Emissions	
(Kilograms per	
Day)	439.09
•	

Year of Analysis =	2004	Emissions	Emissions	Composite		KG of
		Factors with	Factors	Emissions	Vehicle Miles	Emissions per
Old SIP		I&M	without I&M	Rate	of Travel	Day
	Percent of					•
	Vehicles					
Functional	Subject to					
Classification	I&M	89.00%	11.00%			
Urban Functional						
Classification	Speed					
Interstate	60	3.142	3.188	3.15	341,058	1,074.33
Freeway	55	2.154	2.204	2.16	189,419	409.15
Other P-A	30	1.571	1.624	1.58	201,096	317.73
Minor Arterial	32	1.421	1.474	1.43	241,278	345.03
Collector	33	1.357	1.411	1.36	45,573	61.98
Local	35	1.486	1.538	1.49	68,093	101.46
				Total Urban	1,086,517	2,309.67
Rural Functional						
Classification	Speed					
Interstate	0			0.00	0	0.00
Other P-A	0			0.00	0	0.00
Minor Arterial	40	1.789	1.839	1.79	43,781	78.37
Major Collector	43	1.658	1.709	1.66	56,025	93.00
Minor Collector	43	1.650	1.701	1.66	51,971	86.27
Local	44	1.634	1.685	1.64	55,187	90.51
				Total Rural	206,964	348.15

Total
Normalized
VMT for this
Analysis Year= 1,293,481

Total NO<sub>X</sub>
Emissions
(Kilograms per
Day) 2,658.00

Year of Analysis =	2004					
		Emissions	Emissions			KG of
		Factors with	Factors	Composite	Vehicle Miles	Emissions per
		I&M	without I&M	<b>Emissions Rate</b>	of Travel	Day
	Percent of					
Functional	Vehicles Subject					
Classification	to I&M	89.00%	11.00%			
Urban Functional						
Classification	Speed					
Interstate	60	1.074	1.103	1.08	341,058	368.34
Freeway	55	1.134	1.167	1.14	189,419	215.94
Other P-A	30	1.316	1.359	1.32	201,096	265.45
Minor Arterial	32	1.305	1.349	1.31	241,278	316.07
Collector	33	1.297	1.340	1.30	45,573	59.24
Local	35	1.268	1.309	1.27	68,093	86.48
				Total Urban	1,086,517	1,311.52
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	40	1.210	1.247	1.21	43,781	52.98
Major Collector	43	1.206	1.243	1.21	56,025	67.79
Minor Collector	43	1.208	1.245	1.21	51,971	62.88
Local	44	1.207	1.244		55,187	66.78
				Total Rural	206,964	250.43
					Total VOC	
	Total Normalized				Emissions	
	VMT for this					
		4 000 404			(Kilograms per	4 500 00
	Analysis Year=	1,293,481			Day)	1,562.00

1,013.20

Emissions

(Kilograms per

Day)

Year of Analysis =	2010					
		Emissions Factors with I&M	Emissions Factors without I&M	Composite Emissions Rate	Vehicle Miles of Travel	KG of Emissions per Day
	Percent of					
Functional	Vehicles Subject					
Classification	to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	0.603	0.664	0.61	394,415	240.59
Freeway	55	0.632	0.700	0.63	220,808	139.1
Other P-A	30	0.730	0.817	0.73	234,349	171.0
Minor Arterial	32	0.725	0.811	0.73	272,491	198.92
Collector	32	0.726	0.814	0.73	65,851	48.07
Local	32	0.725	0.810	0.73	55,411	40.45
				Total Urban	1,243,325	838.22
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	37	0.686	0.763	0.69	51,453	35.50
Major Collector	43	0.672	0.748	0.68	73,433	49.93
Minor Collector	43	0.673	0.750	0.68	58,318	39.66
Local	45	0.670	0.746		74,461	49.89
				Total Rural	257,665	174.98

1,500,990

**Total Normalized** 

VMT for this

Analysis Year=

Year of Analysis =	2014					
		<b>Emissions</b>	<b>Emissions</b>			KG of
		Factors with	Factors	Composite	Vehicle Miles	Emissions per
		I&M	without I&M	<b>Emissions Rate</b>	of Travel	Day
	Percent of					
Functional	Vehicles Subject					
Classification	to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	0.448	0.516	0.45	429,986	193.49
Freeway	55	0.464	0.541	0.47	241,734	113.61
Other P-A	30	0.528	0.624	0.53	256,518	135.95
Minor Arterial	32	0.525	0.622	0.53	293,300	155.45
Collector	32	0.525	0.623	0.53	79,370	42.07
Local	32	0.526	0.621	0.53	46,956	24.89
				Total Urban	1,347,864	665.47
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	37	0.500	0.587	0.50	56,569	28.28
Major Collector	43	0.490	0.575	0.49	85,039	41.67
Minor Collector	43	0.492	0.577	0.50	62,550	31.28
Local	45	0.491	0.576		87,311	42.78
				Total Rural	291,469	144.01
					Total VOC	
	Total Normalized				Emissions	
	VMT for this					
		4 620 222			(Kilograms per	900 00
	Analysis Year=	1,639,333			Day)	809.00

Year of Analysis =	2020					
		<b>Emissions</b>	<b>Emissions</b>			KG of
		Factors with	Factors	Composite	Vehicle Miles	Emissions per
		I&M	without I&M	<b>Emissions Rate</b>	of Travel	Day
	Percent of					
Functional	Vehicles Subject					
Classification	to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	0.306	0.390	0.31	452,646	140.32
Freeway	55	0.313	0.407	0.32	290,904	93.09
Other P-A	29	0.359	0.475	0.36	226,357	81.49
Minor Arterial	32	0.353	0.468	0.36	359,302	129.35
Collector	33	0.349	0.464	0.35	78,497	27.47
Local	33	0.353	0.466	0.36	55,257	19.89
				Total Urban	1,462,963	491.61
Rural Functional						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	38	0.337	0.440	0.34	68,646	23.34
Major Collector	42	0.331	0.435	0.34	85,735	29.15
Minor Collector	42	0.333	0.437	0.34	72,965	24.81
Local	45	0.331	0.433		115,598	39.30
				Total Rural	342,944	116.60
					Total	
	Total Normalized				Emissions	
	VMT for this					
		1 005 007			(Kilograms per	600.04
	Analysis Year=	1,805,907		;	Day)	608.21

525.28

Day)

Year of Analysis =	2030					
		<b>Emissions</b>	<b>Emissions</b>			KG of
		Factors with	Factors	Composite	Vehicle Miles	Emissions per
		I&M	without I&M	<b>Emissions Rate</b>	of Travel	Day
	Percent of					
Functional	Vehicles Subject					
Classification	to I&M	96.00%	4.00%			
Urban Functional						
Classification	Speed					
Interstate	60	0.227	0.308	0.23	476,536	109.60
Freeway	55	0.229	0.320	0.23	514,714	118.38
Other P-A	28	0.272	0.385	0.28	234,507	65.66
Minor Arterial	34	0.258	0.367	0.26	441,268	114.73
Collector	33	0.258	0.369	0.26	64,830	16.86
Local	31	0.269	0.380	0.27	46,577	12.58
				Total Urban	1,778,432	437.8
Rural Functioanl						
Classification	Speed					
Interstate	0	0.000	0.000	0.00	0	0.00
Other P-A	0	0.000	0.000	0.00	0	0.00
Minor Arterial	38	0.251	0.351	0.26	54,861	14.20
Major Collector	43	0.243	0.343	0.25	87,102	21.78
Minor Collector	42	0.246	0.347	0.25	86,061	21.52
Local	45	0.244	0.343	0.25	119,655	29.9 <sup>-</sup>
				Total Rural	347,679	87.47
					Total	
	Total Normalized				Emissions	
	VMT for this				(Kilograms per	
	0 101 101 till3	0.400.444			(Miogranis per	505.00

2,126,111

Analysis Year=

		Emissions	Emissions			KG of
		Factors with	Factors	Composite	<b>Vehicle Miles</b>	<b>Emissions per</b>
Old SIP		I&M	without I&M	<b>Emissions Rate</b>	of Travel	Day
	Percent of					
Functional	Vehicles Subject					
Classification	to I&M	89.00%	11.00%			
Urban Functional						
Classification	Speed					
Interstate	60	1.114	1.143	1.12	341,058	381.98
Freeway	55	1.176	1.209	1.18	189,419	223.51
Other P-A	30	1.369	1.413	1.37	201,096	275.50
Minor Arterial	32	1.358	1.402	1.36	241,278	328.14
Collector	33	1.349	1.393	1.35	45,573	61.52
Local	35	1.319	1.361	1.32	68,093	89.88
				Total Urban	1,086,517	1,360.55
Rural Functional						
Classification	Speed					
Interstate	0			0.00	0	0.00
Other P-A	0			0.00	0	0.00
Minor Arterial	40	1.257	1.295	1.26	43,781	55.16
Major Collector	43	1.252	1.290	1.26	56,025	70.59
Minor Collector	43	1.254	1.292	1.26	51,971	65.48
Local	44	1.254	1.291	1.26	55,187	69.54
				Total Rural	206,964	260.77
					Total VOC	
	Total Normalized				Emissions	
	VMT for this				(Kilograms per	
	Analysis Year=	1,293,481			Day)	1,621.00

Page 15 Of 16 Date: 8/12/2004 File: Davidson-08-10-04 Worksheet: VMT\_ADJ

Functional Classification	2004 Universe	2004 Model
Urban Functional		
Classification		
Interstate	106,691	341,058
Freeway	66,070	189,419
Other P-A	96,242	201,096
Minor Arterial	94,770	241,278
Collector	11,701	45,573
Local	39,320	68,093
Rural Functional Classification		
Interstate	129,626	-
Other P-A	80,701	-
Minor Arterial	91,881	43,781
Major Collector	120,338	56,025
Minor Collector	63,045	51,971
Local	47,022	55,187
	947,408	1,293,481
Totals		
_		
VMT Adjustment Factors	0.7324	
=		

Page 16 Of 16 Date: 8/12/2004 File: Davidson-08-10-04 Worksheet: COMPARISON

VOC Comparison Table						
Analysis Year	Model(Urban) <sup>2</sup>	Spreadsheet(Rural)	Comparison Amount	Budget Amount(Kg/Day)	Tons/day	
2004 old SIP	1,187	4438	5,626	7,321	8.07	OK
2004	1,562	4,273	5,835	5,888	6.49	OK
2007	1,288	3,503	4,790	5,234	5.77	OK
2010	1,013	2,732	3,745	4,291	4.73	OK
2012	911	2,453	3,364	3,973	4.38	OK
2014	809	2,173	2,982	3,973	4.38	OK
2015	776	2,087	2,863	3,574	3.94	OK
2020	608	1,657	2,265	3,574	3.94	OK
2030	525	1,454	1,980	3,574	3.94	OK

NOx Comparison Table						
Analysis Year	Model(Urban) <sup>2</sup>	Spreadsheet(Rural)	Comparison Amount	Budget Amount(Kg/Day)	Tons/day	
2004 old SIP	1,947	8,537	10,484	11,104	12.24	OK
2004	2,646	8,509	11,155	11,594	12.78	OK
2007	2,092	6,666	8,758	9,516	10.49	OK
2010	1,539	4,822	6,361	7,067	7.79	OK
2012	1,277	3,953	5,230	5,770	6.36	OK
2014	1,016	3,084	4,100	5,770	6.36	OK
2015	944	2,865	3,810	4,282	4.72	OK
2020	586	1,773	2,359	4,282	4.72	OK
2030	439	1,273	1,712	4,282	4.72	OK

<sup>&</sup>lt;sup>1</sup> The conformity estimates for 2007, 2012 and 2015 were developed by interpolating.

<sup>&</sup>lt;sup>2</sup> VMT Normalization applied

# APPENDIX G: Agency Comments on the Draft Report

### **FINAL DRAFT**

### **APPENDIX H: Public Participation Policy**

### **FINAL DRAFT**

### Greensboro Urban Area Metropolitan Planning Organization Public Involvement Plan Revision: January 31, 2001

### **Adopting the Metropolitan Transportation Improvement Program**

#### **Background**

The Metropolitan Planning Organization (MPO) will produce a Metropolitan Transportation Improvement Program (MTIP) that meets applicable federal and state requirements. The MTIP will be developed cooperatively with NCDOT and the Transit Operator. The components of an MTIP will be kept on file by the Lead Planning Agency. The Lead Planning Agency will be responsible for addressing the questions of any person or group making inquiries regarding the MTIP during and following the MTIP development process.

#### **Public Review Policy**

The Technical Coordinating Committee (TCC) and Transportation Advisory Committee (TAC) will review the draft MTIP. The TAC will release the document for a public review period of at least 30 calendar days prior to adopting the MTIP. The provisions that follow may be supplemented with additional outreach and public involvement strategies at the discretion of the MPO.

- 1. **Public notice** inviting written comments will be made. This notice will (1) identify a due date for comments, and a contact for questions or additional information; and (2) list locations where the draft MTIP is available for review and directions for submitting comments, except where space limitations permit only the information in item 1 to be displayed. Public notice will be given through the media outlets listed below. Targeted mailings, other advertising outlets, and additional outreach strategies may also be used.
  - <u>Major newspaper display ads</u> at least two display ads will be run in different weeks in each major paper (including major newspapers serving minority communities) during the public review period;
  - <u>Local access cable television</u> advertisements on the City's Channel 13 will be run throughout the public review period;
  - Notice placed on the website of the Lead Planning Agency throughout the public review period; and
  - A press release to area media outlets made by the Lead Planning Agency at or prior to the commencement of the public review period.
- 2. MTIP documents for public review will be distributed to the following locations:
  - <u>Area offices and libraries:</u> City Clerk's Office, County Commissioners Office, GDOT Office, NCDOT Division 7 Office, Greensboro Transit Authority Office, NC A&TSU Library or Student Union, UNCG Library, all Greensboro Public Library Branches; and
  - The <u>website</u> of the Lead Planning Agency will post the MTIP documents for public review.
- 3. A public meeting will be held during or prior to the aforementioned public review period. The meeting will provide information and the opportunity to make written and oral comments. If the public meeting precedes the public review period, then the public notice shall use the same media outlets as the public review period. One display ad per major

### Greensboro Urban Area Metropolitan Planning Organization Public Involvement Plan Revision: January 31, 2001

newspaper will suffice, and website and local access cable television notices will be run for at least a week prior to the meeting.

- 4. Public comments received through the public involvement process will be documented and presented to the TCC and TAC at or prior to the meeting of adoption for the MTIP in summary form or verbatim at the Lead Planning Agency's discretion. Responses to public comments will be included as appropriate. When the comments received are deemed sufficiently significant, a summary and a statement of the disposition of the comments will documented and be provided with the final MTIP document to FHWA, FTA, and NCDOT, and made available to other parties upon request or as otherwise appropriate.
- 5. Additional strategies for informing and involving low income and minority communities will be used in addition to measures listed above that contribute to this objective such as newspaper advertising and the availability of documents in all Greensboro Branch Libraries. At a minimum, these will include targeted mailings to the transit operator's community organizations mailing list. Additional strategies will be tested, documented, and evaluated for inclusion in future Public Involvement Plan updates.

### Amending the Metropolitan Transportation Improvement Program and Long Range Transportation Plan

### **Background**

Periodically, amendments or updates to the Metropolitan Transportation Improvement Program (MTIP) and the Long Range Transportation Plan are needed. These amendments or updates will be made to meet applicable federal and state requirements and will be developed cooperatively with NCDOT and the Transit Operator. Such materials will be kept on file by the Lead Planning Agency. The Lead Planning Agency will be responsible for addressing the questions of any person or group making inquiries regarding the amendments.

### **Public Review Policy**

The Technical Coordinating Committee (TCC) and Transportation Advisory Committee (TAC) will review the draft amendment(s). For Major Amendments, the TAC will release the document(s) for a public review period of at least 30 calendar days prior to adoption. A public review period will not be necessary for Minor Amendments, but may be held at the discretion of the MPO. Major amendments will typically include additional conformity analysis and/or other significant changes to highway capacity projects or transit programs. Minor Amendments typically include (1) the addition, deletion, or rescheduling of projects classified as exempt from air quality analysis such as safety projects, individual transit projects short of major expansions of the transit fleet, and (2) project schedule changes on regionally significant projects not requiring a shift of horizon years.

### Greensboro Urban Area Metropolitan Planning Organization Public Involvement Plan Revision: January 31, 2001

The following public involvement provisions may be supplemented with additional measures. MTIP and LRTP amendments and updates have the same public involvement requirements as adopting the MTIP with the following exceptions:

- One display ad per major newspaper at a minimum will suffice; and
- Public meeting(s) are at the discretion of the TCC Chair and/or TAC Chair.

### **Amending the Public Involvement Plan**

Revisions to the Public Involvement Plan have the same public notice requirements as a Major MTIP Amendment, except that the minimum public review period will be 45 calendar days.

# Proposed 2030 Long Range Transportation Plan and Air Quality Conformity Analysis Report

You're invited to review and submit comments



### Long Range Transportation Plan

Document available at:

www.greensboro-nc.gov/gdot/Proposed\_Irtp

**Greensboro City Clerk's Office** 

**Guilford County Commissioners' Office** 

**Greensboro Department of Transportation** 

**NCDOT Division 7 Office** 

### Long Range Transportation Plan

**Greensboro Transit Authority Office** 

NCA&TSU and UNCG Libraries

**Greensboro Public Libraries** 

Town Halls of Oak Ridge, Pleasant Garden, Sedalia, Stokesdale and Summerfield

www.greensboro-nc.gov/lrtp/proposed\_Irtp

# Long Range Transportation Plan

For More Information:

Visit

www.greensboro-nc.gov/gdot/Proposed\_Irtp

Or call 373-GDOT (4368)

Your input is valuable to the development of the final plan!

### **Available For Public Review**

### **Greensboro Urban Area Proposed 2030 Long Range Transportation Plan**

The Greensboro Urban Area Metropolitan Planning Organization invites you to review and provide comments on the Proposed 2030 Long Range Transportation Plan (LRTP) and Air Quality Conformity Analysis Report. The Proposed LRTP is the official transportation vision for all highway, public transportation, rail, freight, bicycle, pedestrian, and transportation enhancement projects in Guilford County except for the Burlington, Gibsonville, Whitsett, High Point, and Jamestown areas. The Air Quality Report documents how well the LRTP conforms to Federal air quality requirements

The documents are the culmination of research, development and 13 public involvement meetings during the past 9 months. The public review period begins July 12<sup>th</sup> and concludes on August 11<sup>th</sup>. During the review period a final public involvement meeting will take place on July 29<sup>th</sup> from 6:00pm to 7:30pm in the Greensboro City Council Chambers.

The Proposed LRTP and Air Quality Report will be available for review at the Greensboro City Clerk's Office, Guilford County Commissioners' Office, Greensboro Department of Transportation, NCDOT Division 7 Office, Greensboro Transit Authority Office, NCA&TSU and UNCG Libraries, all branches of the Greensboro Public Library, the town halls of Oak Ridge, Pleasant Garden, Sedalia, Stokesdale and Summerfield, and at www.greensboro-nc.gov/lrtp/proposed lrtp/.

For more information please contact:

Greensboro Urban Area Metropolitan Planning Organization (336) 373-4378

Email: gdot@greensboro-nc.gov

Or visit: http://www.greensboro-nc.gov/gdot/planning/mpo/

### **Available For Public Review**

# Greensboro Urban Area Proposed 2030 Long Range Transportation Plan

8

### **Air Quality Conformity Report**

The Greensboro Urban Area Metropolitan Planning Organization invites you to review and provide comments on the Proposed 2030 Long Range Transportation Plan (LRTP) and Air Quality Conformity Analysis Report. The Proposed LRTP is the official transportation vision for all highway, public transportation, rail, freight, bicycle, pedestrian, and transportation enhancement projects in Guilford County except for the Burlington, Gibsonville, Whitsett, High Point, and Jamestown areas. The Air Quality Report documents how well the LRTP conforms to Federal air quality requirements.

The documents are the culmination of research, development and 13 public involvement meetings during the past 9 months. The public review period concludes on August 11, 2004.

Final Public Involvement Meeting, July 29<sup>th</sup>, 6:00pm to 7:30pm, Greensboro City Council Chambers

The Proposed LRTP and Air Quality Report are available for review at the Greensboro City Clerk's Office, Guilford County Commissioners' Office, Greensboro Department of Transportation, NCDOT Division 7 Office, Greensboro Transit Authority Office, NCA&TSU and UNCG Libraries, all branches of the Greensboro Public Library, the town halls of Oak Ridge, Pleasant Garden, Sedalia, Stokesdale and Summerfield, and at www.greensboro-nc.gov/lrtp/proposed\_lrtp/.

For more information please contact:

Greensboro Urban Area Metropolitan Planning Organization (336) 373-4378

Email: gdot@greensboro-nc.gov

Or visit: http://www.greensboro-nc.gov/gdot/planning/mpo/



# Proposed 2030 Long Range Transportation Plan

Transportation Plan

#### You are invited!

The Greensboro Urban Area Metropolitan Planning Organization (MPO) invites you review and submit comments on the **Proposed 2030 Long Range Transportation Plan** (LRTP) and associated **Air Quality Conformity Analysis Report**. The Proposed LRTP is the official transportation vision for all highway, public transportation, rail, freight, bicycle, pedestrian, and transportation enhancement projects in Guilford County except for the Burlington, Gibsonville, Whitsett, High Point, and Jamestown areas.

#### The Plan:

The plan document is the culmination of research, development and 13 public involvement meeting during the past 9 months. The public review period begins July 12, 2004 and concludes on August 11, 2004.

The plan assess future roadway, public transportation, bicycle and pedestrian facility, and rail needs; identifies investment strategies in light of anticipated future resource availability and limitations; and addresses a range of public policy issues regarding the future transportation system.

### **Upcoming Activities:**

During the review period a **final public involvement meeting** will take place on **July 29**<sup>th</sup> **from 6:00pm to 7:30pm in the Greensboro City Council Chambers.** You are encouraged to participate!

### Who Should Review, Comment and Participate?

- Anyone who drives, bikes, walks, or rides public transportation
- Anyone interested in commerce and the movement of goods
- People interested in shaping the future of their community and the transportation system

Comments are due in writing by August 11, 2004. The document is available for review at www.greensboro-nc.gov/lrtp/proposed\_lrtp, the Greensboro City Clerk's Office, Guilford County Commissioners' Office, Greensboro Department of Transportation, NCDOT Division 7 Office, Greensboro Transit Authority Office, NCA&TSU and UNCG Libraries, all branches of the Greensboro Public Library, and the town halls of Oak Ridge, Pleasant Garden, Sedalia, Stokesdale, and Summerfield.

Send comment to: Attn. LRTP

**Greensboro Department of Transportation** 

P.O. Box 3136

Greensboro, NC 27402-3136

Fax: (336)412-7161

Email: gdot@greensboro-nc.gov

Please call (336) 373-GDOT (4368) if you wish to speak to a staff member regarding a question.

### APPENDIX I: Comments on the Conformity Determination by Citizens

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### **Public Comments**

No public comments on the Conformity Analysis Report were received during the thirty day public review period.

Wednesday, August 11, 2004 was the final day of the public review period.

# APPENDIX J: Resolution Adopting the Greensboro Urban Area Long Range Transportation Plan

### **FINAL DRAFT**

### RESOLUTION ADOPTING THE GREENSBORO URBAN AREA 2030 LONG RANGE TRANSPORTATION PLAN

A motion was made by TAC Member <u>Bob Landreth</u> and seconded by TAC Member <u>Don Vaughan</u> for the adoption of the following resolution, and upon being put to a vote was duly adopted.

**WHEREAS**, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) require all Metropolitan Planning Organizations (MPO's) to develop and maintain a Long Range Transportation Plan; and

**WHEREAS**, the Long Range Transportation Plan must address all modes of transportation in an urban area, have a horizon year of at least 20 years, and be fiscally constrained; and

**WHEREAS**, the Greensboro Urban Area Thoroughfare Plan is hereby incorporated as a part of the Long Range Transportation Plan; and

**WHEREAS**, the socio-economic data inputs for the Piedmont Triad Regional Travel Demand Model, upon which forecasts of future vehicular travel and air pollutant emissions are based, have been updated to reflect the most recent planning assumptions; and

**WHEREAS**, the Greensboro Urban Area Metropolitan Planning Organization has found the 2030 Long Range Transportation Plan to be in conformance with the North Carolina State Implementation Plan for maintenance of the National Ambient Air Quality Standards; and

**WHEREAS**, the Transportation Advisory Committee has provided for a 30-day public comment period for the proposed Long Range Transportation Plan; and

WHEREAS, the Transportation Advisory Committee has solicited public and private transportation provider comments; and

**WHEREAS**, the Transportation Advisory Committee has found the proposed Long Range Transportation Plan to be in full compliance with Title VI of the Civil Rights Act; and

**WHEREAS**, the Transportation Advisory Committee has considered how the proposed Long Range Transportation Plan will affect Disadvantaged Business Enterprises; and

**WHEREAS**, the Transportation Advisory Committee has considered how the proposed Long Range Transportation Plan will affect the elderly and the disabled.

**NOW THEREFORE, be it resolved** by the Greensboro Urban Area Transportation Advisory Committee, that the 2030 Long Range Transportation Plan, dated August 25, 2004, be adopted for the Greensboro Urban Area Metropolitan Planning Organization on this the 25<sup>th</sup> day of August, 2004.

*************	*************
I, Sandy Carmany , TAC C	
(Name of Certifying Official) (Title of Certif	fying Official)
do hereby certify that the above is a true and correct c the Greensboro Urban Area TAC duly held on this, th	
C	hair, Transportation Advisory Committee
*************	*************
Subscribed and sworn to me this, the 25th day of Aug	ust, 2004.
N	Notary Public
My commission expires 11/9/2008.	OFFICIAL SEAL MARCEL A. EDWARDS Notary Public - North Carolina GUILFORD COUNTY My Commission Expires

### APPENDIX K: Greensboro Urban Area Resolution Finding the Transportation Plan and Transportation Improvement Program in Conformity with the SIP

### RESOLUTION FINDING THE 2030 GREENSBORO URBAN AREA LONG RANGE TRANSPORTATION PLAN AND THE FY 2004-2010 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM IN CONFORMANCE WITH THE NORTH CAROLINA SIP

A motion was made by TAC Member <u>Don Vaughan</u> and seconded by TAC Member <u>Robbie Perkins</u> for the adoption of the following resolution, and upon being put to a vote was duly adopted.

WHEREAS, the Transportation Advisory Committee is the duly recognized transportation decision making body for the continuing, comprehensive, and cooperative (3C) transportation planning process in the Greensboro Urban Area Metropolitan Planning Organization required by 23 CFR Part 134; and

**WHEREAS**, the Greensboro Urban Area 2030 Long Range Transportation Plan and the FY 2004-2010 Transportation Improvement Program meet the planning requirements of 23 CFR Part 134; and

**WHEREAS**, the United States Environmental Protection Agency re-designated Guilford County as maintenance for ozone on November 8, 1993; and

**WHEREAS**, the conformity analysis of the Greensboro Urban Area 2030 Long Range Transportation is based on the most recent estimates of population, employment, travel, and congestion as required in 40 CFR Part 93.110; and

**WHEREAS**, the transportation projects in the Greensboro Urban Area 2030 Long Range Transportation Plan and the FY 2004-2010 Transportation Improvement Program have been fiscally constrained as required in 40 CFR Part 93.108; and

**WHEREAS**, there are no transportation control measures in the North Carolina State Implementation Plan that pertain to the Greensboro Urban Area as required in 40 CFR Part 93.113(b): and

**WHEREAS**, the most recent motor vehicle emissions model was used to prepare the quantitative emissions analysis, dated August 25, 2004 as required in 40 CFR Part 93.111; and

**WHEREAS**, those projects and programs included in the Greensboro Urban Area 2030 Long Range Transportation Plan and the FY 2004-2010 Transportation Improvement Program contribute to annual emissions reductions as shown by the quantitative emissions analysis, dated August 25, 2004; and

**WHEREAS**, the FY 2004-2010 Transportation Improvement Program is a subset of the conforming Greensboro Urban Area 2030 Long Range Transportation Plan and thus conforms to the North Carolina State Implementation Plan for maintenance of the National Ambient Air Quality Standards.

**NOW THEREFORE, be it resolved**, that the Greensboro Urban Area 2030 Long Range Transportation Plan Conforms to the purpose of the North Carolina State Implementation Plan in accordance with the Clean Air Act as Amended.

****	*********	******************	<b>*</b> *
I,	Sandy Carmany	TAC Chair	
(1	Sandy Carmany Name of Certifying Official)	(Title of Certifying Official)	
		rue and correct copy of an excerpt from the minutes of a meeting y held on this, the 25 <sup>th</sup> day of August, 2004.	of
		Chair, Transportation Advisory Committee	
****	*********	****************	*
Subsc	cribed and sworn to me this, the	25 <sup>th</sup> day of August, 2004.	
		Marul a. Edular Notary Public	
Мус	ommission expires 11/9/100	OFFICIAL SEAL MARCEL A. EDWARDS Notary Public - North Carolina GUILFORD COUNTY My Commission Expires	

# APPENDIX L: Resolution Adopting the Greensboro Urban Area Transportation Improvement Program

### RESOLUTION ADOPTING THE FINAL GREENSBORO URBAN AREA METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM FY 2004 - FY 2010

A motion was made by TAC Member <u>Bob Landreth</u> and seconded by TAC Member <u>Robbie Perkins</u> for the adoption of the following resolution, and upon being put to a vote was duly adopted.

**WHEREAS**, the Transportation Advisory Committee has found the Metropolitan Planning Organization is conducting transportation planning in a continuous, cooperative, and comprehensive manner in accordance with 23 U.S.C. and 49 U.S.C. 1607; AND

WHEREAS, the Transportation Advisory Committee has found that the Transportation Improvement Program conforms to the purpose of the North Carolina State Implementation Plan for maintaining the National Ambient Air Quality Standards in accordance with 40 CFR 51 & 93; AND

WHEREAS, the Transportation Advisory Committee has found the Transportation Improvement Program to be in full compliance with Title VI of the Civil Rights Act of 1964 and Title VI Assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794; AND

**WHEREAS**, the Transportation Advisory Committee has considered how the Transportation Improvement Program will affect the participation of Disadvantaged Business Enterprises in FHWA and FTA funded projects (Sec. 105(f), Pub. L. 97-424, 96 Stat. 2100, 49 CFR part 23); AND

**WHEREAS**, the Transportation Advisory Committee has considered how the Transportation Improvement Program will affect elderly and disabled persons, in compliance with the Americans With Disabilities Act of 1990 (Pub. L. 101-336, 104 Stat. 327, as amended) and the U.S. DOT implementing regulations; AND

**WHEREAS**, the Greensboro Urban Area Metropolitan Transportation Improvement Program is a subset of the currently conforming Long Range Transportation Plan; AND

**WHEREAS**, the Transportation Plan has a planning horizon year of 2025, and meets all the requirements for an adequate Transportation Plan; AND

**WHEREAS**, the Transportation Advisory Committee has provided for a 30 day public comment period for the proposed Transportation Improvement Program; AND

**WHEREAS**, the Transportation Advisory Committee has solicited public and private transportation provider comments; AND

**WHEREAS**, the Transportation Improvement Program, for years one through three, will serve as the project selection document for transportation within the Greensboro Urban Area Metropolitan Area Boundary, and the NCDOT may move projects and phases of projects without additional programming or project selection approval by the MPO within that three-year period, providing that air quality conformity and financial constraint criteria are still met.

NOW THEREFORE be it resolved by the Greensboro Urban Area Transportation Advisory

Committee that the Metropolitan Transportation Improvement Program for FY 2004 - FY 2010, dated

### **FINAL DRAFT**

### **FINAL DRAFT**

# APPENDIX M: Resolution Adopting the Burlington -Graham Urban Area Transportation Plan

# APPENDIX N: Resolution Adopting the Burlington - Graham Urban Area Transportation Improvement Program

### APPENDIX O: Burlington -Graham Urban Area Resolution Finding the Transportation Plan and Transportation Improvement Program in Conformity with the SIP